

# 1 PATENT ABSTRACTS OF JAPAN

(11)Publication number : 2000-207638

(43)Date of publication of application : 28.07.2000

---

(51)Int.Cl. G07G 1/01  
G06F 1/16  
G09F 9/00

---

(21)Application number : 11-158444 (71)Applicant : NCR INTERNATL INC  
(22)Date of filing : 28.04.1999 (72)Inventor : WILKE JR CHARLES K  
HERWIG NATHANIEL C

---

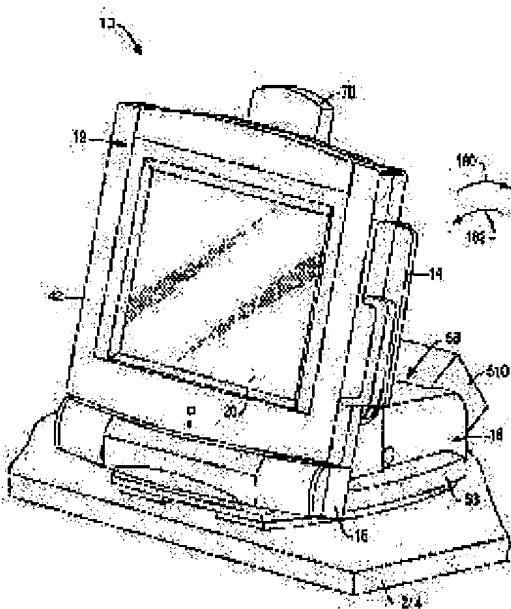
(30)Priority  
Priority number : 98 70501 Priority date : 30.04.1998 Priority country : US

---

## (54) RETAIL TERMINAL PROVIDED WITH FUNDAMENTAL ASSEMBLY FOR SINGLE FUNCTION AND FUNDAMENTAL ASSEMBLY FOR PLURAL FUNCTIONS AND ITS OPERATION METHOD

### (57)Abstract:

PROBLEM TO BE SOLVED: To provide a small-sized retail terminal which can be installed in various places of a retail store and is provided with an electronic module which a user can operate.



second period.

---

## CLAIMS

---

### [Claim(s)]

[Claim 1]It is an operation method of a retail terminal (10) characterized by a series of following steps, Namely, a thing provided with a core module assembly (12) and a retail terminal which, on the other hand, has a tropism basic assembly (246) and a multiple-directions nature basic assembly (18), On the other hand, a tropism basic assembly (246) is equipped with the core module assembly (12), While the core module assembly is being fixed to a tropism basic assembly (246) on the other hand, the core module assembly (12) operation is carried out so that a selling function can be performed, On the other hand, it is desorbed from a tropism basic assembly (246) from a core module assembly (12), A multiple-directions nature basic assembly is equipped with a core module assembly (12) after this desorption step, And an operation method characterized by many steps of operating [ while the core module assembly (12) is being fixed to a multiple-directions nature basic assembly (18) in a core module assembly (12) / so that a selling function may be performed ] \*\*.

[Claim 2]While a tropism basic assembly (246) is equipped with a core module assembly (12) on the other hand, an un-caring-for nature selling function is performed, And a method according to claim 1, wherein a care nature selling function is performed while a multiple-directions nature basic assembly (18) is equipped with a core module assembly (12).

[Claim 3]While a core module assembly (12) is being fixed to a tropism basic assembly (246) on the other hand, a selling function is performed in the 1st period, And a method according to claim 1 to 2, wherein a selling function is performed in the 2nd period while a core module assembly (12) is being fixed to a multiple-directions nature basic assembly (18).

[Claim 4]A method comprising according to claim 1 to 3:

A step performed while a core module assembly (12) is being fixed to a multiple-directions nature basic assembly (18), While a core module assembly (12) is placed in the 1st direction to a multiple-directions nature basic assembly (18), the core module assembly (12) is operated.

A core module assembly (12) is moved in the 2nd direction from the 1st direction to a multiple-directions nature basic assembly after 1 direction operation step.

Between \*\*\*\*\* placed in the 2nd direction to a multiple-directions nature basic assembly (18), a core module assembly (12) operates the core module assembly (12).

Many steps.

[Claim 5]A method according to claim 1 to 4 characterized by what it is [ a thing ] characterized by comprising the following.

A core module assembly (12) which has the 1st display screen (20).

It has a multiple-directions nature basic assembly (18) which has the 2nd display screen (510), And a step as which a step performed while a core module assembly (12) is being fixed to a multiple-directions nature basic assembly (18) displays sales information on both the 1st display screen (20) and the 2nd display screen.

[Claim 6]On the other hand, the 1st power cable (556) is supported by tropism basic assembly (246), The 2nd power cable (52) is supported by multiple-directions nature basic assembly (18), A core module assembly (12) contains a power connector (25), A step performed while a core module assembly (12) is being fixed to a tropism basic assembly (246) on the other hand, While the 1st power cable (556) is combined with a power connector (26), A step which operates a core module assembly (12) is included, And a step performed while a core module assembly (12) is being fixed to a multiple-directions nature basic assembly (18), A method according to claim 1 to 5 by which a step which operates a core module assembly (12) being included while the 2nd power cable (52) is combined with a power connector (26).

[Claim 7]it is a retail terminal (10) and has the 1st core module attachment structure (296, 268) -- on the other hand -- a tropism basic assembly (246). A multiple-directions nature basic assembly

(18) which has the 2nd core module attachment structure (116), and -- it is a core module assembly (12) -- (i) -- in the 1st period currently fixed to said 1st core module attachment structure (296, 268), said core module assembly (12) a selling function, [ perform and ] (ii) They are an operational core module assembly and a retail terminal characterized as alike so that said core module assembly (12) may perform a selling function in the 2nd period currently fixed to said 2nd core module attachment structure (116) (10).

[Claim 8]The retail terminal (10) according to claim 7 where said core module assembly (12) is characterized by an operational thing in said 1st period and the 2nd period, respectively so that un-caring-for nature and a care nature selling function can be performed.

[Claim 9]Can position said multiple-directions nature basic assembly (18) between the 1st direction and the 2nd direction, and and said core module assembly (12), The retail terminal according to claim 8 being operational so that said care nature selling function may be performed when said multiple-directions nature basic assembly (18) is positioned by both said 1st direction and said 2nd direction.

[Claim 10]The aforementioned one-way nature basic assembly (246), Support the 1st power cable (556) and said multiple-directions nature basic assembly (18), Support the 2nd power cable (52) and said core module assembly (12), Including a power connector (26), said 1st power cable (556), When being operated so that said core module assembly (12) may perform said un-caring-for nature selling function, It is combined with said power connector (26), and and said 2nd power cable (52), The retail terminal according to claim 8 to 9 characterized by being combined with said power connector (26) when being operated so that said core module assembly (12) may perform said care nature selling function.

[Claim 11]Said core module assembly (12), Including the 1st display screen (20), said multiple-directions nature basic assembly (18), While sales information is operated including the 2nd display screen (510) so that said core module assembly (12) may perform said care nature selling function, The retail terminal according to claim 8 to 10 characterized by what is displayed on both said 1st display screen (20) and said 2nd display screen (510).

## **DETAILED DESCRIPTION**

---

### **[Detailed Description of the Invention]**

#### **[0001]**

[Industrial Application]This invention is concerned with the retail terminal possessing the leaning device which is generally concerned with a retail terminal and which contains the ratchet for positioning a display monitor at an install stand still more specifically.

#### **[0002]**

[Description of the Prior Art]In the retail industry, some electronic formula retail terminals are used over the whole retail trade store. For example, a retail trade store may contain some POS (selling point) terminals, for example, a traditional care nature (that is, based on salesclerk's operation) check-out terminal. Furthermore, a retail trade store may include, some un-caring-for nature terminals, for example, a self service checkout terminal, other than a care nature POS terminal. A self service checkout terminal is a terminal operated without a store employee's care by the customer.

[0003]Furthermore, some information retail terminals [ like kiosk molding equipment ] other than a POS terminal whose retail trade store is may be included. Generally such an information retail terminal is installed in the whole selling area of a retail trade store, and it is provided in order to perform a variety-of-information selling function like a commodity exhibition selling function. In particular, an information retail terminal may be used as a commutative retail terminal which gives a customer care according to the input of the customer by a keyboard and others, in order to display merchandise information to a store customer.

#### **[0004]**

[Problem(s) to be Solved by the Invention]The retail terminal designed so far has some faults relevant to a design. The retail terminal in particular designed so far does not have the elasticity which performs various kinds of selling functions. For example, the retail terminal generally

designed so far may not have the elasticity which performs both a commodity exhibition selling function and a POS selling function. Therefore, it is a sales information terminal and it is still more preferred by adding correction to it slightly to supply the sales information terminal which functions also as a POS terminal at the time of peak demand.

[0005]the available surface area of retail trade inside of a shop in which the case attached to the retail terminal designed so far is comparatively large, i.e., floor area, -- a large quantity is needed comparatively. Therefore, it is preferred to supply the retail terminal provided with a user's operational electronic module which can be moved easily [ large various places of a retail trade store ], and can be installed comparatively small.

[0006]Therefore, the purpose of this invention is to provide the new thru/or advanced device for operating a retail terminal, and a method. In one aspect of affairs with this invention, the retail terminal operation information characterized by a series of following steps is given. Namely, the thing to establish for a core module assembly and the retail terminal provided with a tropism basic assembly and a multiple-directions nature basic assembly on the other hand, While the core module assembly is being fixed to the tropism basic assembly on the other hand in the core module assembly, It is operated so that a selling function can be performed, On the other hand, the core module assembly is removed from a tropism basic assembly, A multiple-directions nature basic assembly is equipped with the core module assembly after this separation step, And while the core module assembly is being fixed to the multiple-directions nature basic assembly in the core module assembly, they are many steps of operating [ so that a selling function may be performed ] \*\*.

[0007]

[Means for Solving the Problem]A core module assembly may enable it to perform a care nature selling function, while the core module assembly is being fixed to a multiple-directions nature basic assembly. A retail terminal characterized by the following is given in another aspect of affairs of this invention. While it has the 1st core module attachment structure, namely, a tropism basic assembly, A multiple-directions nature basic assembly provided with the 2nd core module attachment structure, And the (i) aforementioned core module assembly performs a selling function in the 1st period currently fixed to said 1st core module attachment structure, and (ii) -- in the 2nd period currently fixed to said 2nd core module attachment structure, said core module assembly performs a selling function -- as -- an operational core module assembly -- it comes out. If it can do, in said 1st period and the 2nd period, an operational thing is preferred [ said core module assembly ] respectively so that un-caring-for nature and a care nature selling function can be performed.

[0008]If it can do, said multiple-directions nature basic assembly, Positioning between the 1st direction and the 2nd direction is possible, and when said multiple-directions nature basic assembly is positioned in said 1st direction and said 2nd direction, a thing operational so that said care nature selling function may be performed of said core module assembly is preferred. If it can do, said core module assembly contains the 1st display screen, As for said multiple-directions nature basic assembly, while said core module assembly is performing said care nature selling function, including the 2nd display screen, it is preferred that sales information is displayed on both said 1st display screen and said 2nd display screen. Suppose that an attached figure is referred to based on an example so that this invention may be understood still more easily.

[0009]

[Embodiment of the Invention]Suppose henceforth that an attached drawing is referred to as an example so that this invention may be understood still better. If Drawing 5 is referred to from attached Drawing 1 of a drawing, the consumer commutative retail terminal 10 is shown. This may be constituted so that some selling functions, for example, POS selling functions and commodity exhibition selling functions, may be achieved. This retail terminal 10 may be used for performing the function of either care nature or un-caring-for nature.

[0010]The place which is called "POS selling function" here and which carries out a definition is a function performed by the retail terminal, when being operated, although a retail terminal checks purchase items. . If some examples of a POS selling function are given, will be based on a (i) scanner device. . Are based on the input to the retail terminal memory of items, and a (ii) touch screen input device. The input to the retail terminal memory of items, calculation of the prices of the items inputted into the (iii) retail terminal and the display in the display monitor of the

transaction data containing the total price of (v) input items, \*\*\*\*\*.

[0011]The place which is called "commodity exhibition selling function" and which carries out a definition is a function performed by the retail terminal, when used for a retail terminal supplying sales information to a customer. As such sales information, merchandise information, such as (i) item description and a price, and inside-of-a-shop layout information like the goods arrangement in (ii) inside of a shop are mentioned. The input to the retail terminal memory of the sales information question by a (i) scanner device if some examples of commodity exhibition sales information are given, (ii) Displaying merchandise information on a display monitor according to the input to the retail terminal memory of the sales information question by a touch screen input device, the comparison with the merchandise data base of (iii) sales information inquiry data, and reappearance of a (v) sales information question, \*\*\*\*\*.

[0012]The place which is called "care nature selling function" here and which carries out a definition is a selling function performed by the retail TAMIRU, when operated by the assistant employed so that a retail terminal may operate the retail terminal by the salesclerk or a storekeeper. For example, in a care nature selling function, an employed salesclerk inputs a customer's purchase items into a retail terminal by the means of a scan or others, When depressing the payment receipt key of a retail terminal which shows after that that the customer paid the item, it is a function performed by the retail terminal according to it.

[0013]The place which is called "un-caring-for nature selling function" and which carries out a definition is a selling function performed by the customer itself without care of a salesclerk and the personnel employed by other storekeepers. For example, in an un-caring-for nature selling function, the customer itself inputs purchase items into a retail terminal by the means of a scan or others, the time (for example, a credit / debit card reading machine.) of depressing the payment key of a retail terminal which shows after that that the customer paid the item Or it is a function which is performed via an interaction with a cash receipt machine and which is performed by the retail terminal according to it.

[0014]The retail terminal 10 contains the core module assembly 12, the card reading machine 14, and the stereo speaker assembly 16. The retail terminal 10 contains further the multiple-directions nature thru/or the pivot rotation basic assembly 18 to which the core module assembly 12 is fixed. The place which is called a "multiple-directions nature basic assembly" or "pivot rotation basic assembly" here and which carries out a definition, It is a basic assembly and is a basic assembly which positions the core module assembly 12 in one of many directions thru/or angles to the basic assembly 18.

[0015]The core module assembly 12 contains a display screen thru/or the monitor 20, the mainboard assembly 48, and the radio type local area network (LAN) card 66. Although both the display screen 20 and the mainboard assembly 48 are installed in the case 40, LAN card 66 is projected from the case 40, and is covered with the covering 70. He has to understand that the covering 70 comprises a suitable material for the covering 70 to be in LAN card 66, and promote [ function as an antenna, and ] transmission and reception of the signal from the card by it.

[0016]As shown in Drawing 5, the case 40 contains the front enclosure 42, the rear enclosure 44, and the heat distribution back cover 46. The pivot rotation basic assembly 18 contains the leaning device 56 and the install stand 58. The leaning device 56 combines the core module assembly 12 with the install stand 58. Therefore, the leaning device 56 enables arbitrary one out of many directions thru/or angles for the core module assembly 12 to follow and to position the display monitor 20 to the install stand 58 so that it may discuss still in detail later. Such pivot rotation of the core module assembly 12 is useful to especially the facilities of use of the retail terminal by various users (for example, it becomes a salesclerk of a register when the retail terminal is operating as a care nature retail terminal). Because, it is since a user is what likes that a display monitor is positioned in another angle to the install stand 58, respectively.

[0017]As shown in Drawing 4 and Drawing 6, the mainboard assembly 48 contains the main controller board 22 with some electric connectors 24, 26, 28, 30, 32, 36, and 38. So that it may discuss still in detail later some of the peripheral equipment, It is electrically combined with the main controller board 22 via the electric connectors 24, 26, 28, 30, 32, 34, 36, and 38, and may be made for execution of some selling functions of the retail terminal 10 to be attained by it. The main controller board 22 is constituted so that the POS card 410 may be included, and it may be made to increase the number of the peripheral equipment combined with the mainboard

assembly 48 by it.

[0018]Although especially the POS card 410 contains the electric connectors 412 and 414 of a couple, it may be used in order to combine with the main controller board 22 the peripheral equipment usually contained in a POS device in these connectors. For example, the electric connector 412 may be used for combining the cash drawer machine 508 (refer to the 6th figure) with the main controller board 22, On the other hand, the electrical connector 414 may be used for combining the customer display monitor 510 (refer to 1st, 2, and 6 figure) with the main controller board 22. The mainboard assembly 48 contains the monophonic speaker 84. Since the pedal point and sound accompanying operation of the retail terminal 10 are generated, this is provided.

[0019]The retail terminal 10 contains the electric power supply machine 50, as further shown in Drawing 3. The electric power supply machine 50 is electrically combined with the main controller board 22 via the middle power cable 52 (refer to the 6th figure). The power cable 54 (refer to the 6th figure) combines the electric power supply machine 50 with a power supply like the standard 110VAC output 512, and supplies electric power to the retail terminal 10 by it.

[0020]The electric power supply machine 50 is stored into the install stand 58 of the pivot rotation basic assembly 18. It is fixed to the button structure 60 of the install stand 58, and especially the electric power supply machine 50 is covered with the covering 60. He has to understand that such composition is what strengthens cable duct Osamu relevant to the retail terminal 10.

Especially the install stand 58 provides some openings 64 for cable connection in the inside (refer to the 2nd figure). The 1st end of the power cable 54 is combined with the power-outlet mouth 512, and the 2nd end of the power cable 54 may be advanced through any one of the openings 64 for connection, and may be connected to the electric power supply machine 50 after that. By such composition, covering by the covering 62 by one side, from an electric power supply machine, become the middle power cable 52 possible to advance to the power connector 26 (refer to Drawing 4 and the 5th figure), and by it. If some of the middle power cables 52 do not carry out a pendant or it does not do so, such suspension that will be hung from the retail terminal 10 can be prevented.

[0021]By constituting the pivot rotation basic assembly 18 in this way, The cable of others attached to the retail terminal 10, for example, a LAN cable and a speaker cable, the opening 64 for the said connection, It becomes possible to advance without producing the suspension which will be hung from the retail terminal 10, if a pendant is not carried out or it does not do so, and to connect with the corresponding electrical connectors 24, 28, 30, 32, 34, 36, 38, 412, and 414.

[0022]Next, reference of Drawing 6 shows the block diagram of the core module assembly 12. The main controller board 22 of the core module assembly 12 is a corrected type flat panel personal computer (PC) fundamentally. Usually, some parts 420 attached to a personal computer, for example, a microprocessor, some memory modules 422, the ethernet controller 424, some videos, the audio equipment 426, and the hard drive device 72 are included. The main controller board 22 is electrically combined with the card reading machine 14, the stereo speaker assembly 16, the display screen 20, LAN card 66, the movement detector 68, and the monophonic speaker 84. Further again the main controller board 22, It may electrically be connected to the external display monitor 74, the printer 76, the keyboard 78, the scanner device 80, another external speaker assembly 82 like headphone, a cash drawer machine, and the display monitor 510 for customers.

[0023]The term of a "core module assembly" must understand here meaning the computing device which contains the following parts at least. Namely, a display monitor like a (i) touch screen LCD display monitor, (ii) two or more connectors for combining electrically the handling unit which processes data input like a personal computer inputted, and the sales peripheral equipment of (iii) some with the handling unit -- come out.

[0024]The card reading machine 14 is combined with the main controller board 22 via the data communication line 86. This card reading machine 14 may be which a known magnetic piece reading machine containing a credit and/or a debit card reading machine, or a smart card reading machine.

[0025]The stereo speaker assembly 16 is combined with the main controller board 22 via the stereo cable 88 of a couple. This stereo speaker assembly 16 may contain the stereo loud speaker of which known mold. As shown in Drawing 32 and Drawing 33, the retail terminal 10

must understand that it may have the composition that the stereo speaker assembly 16 is not used so that a specific selling function may be suited. When constituted such, the monophonic speaker 84 combined with a main controller board via the loudspeaker line 90 generates the audibility sound and the pedal point relevant to operation of the retail terminal 10.

[0026]The display monitor 20 is combined with the main controller board 22 via the data communication line 92. The display monitor 20 may be any one of the liquid crystal (LCD) monitors of much known. The display monitor 20 is formed in order to display various kinds of vision messages, such as video for video goods demonstration, goods advertisement, and employment member training. as long as it becomes (it discusses still in detail later -- as), a display monitor may use so that the information relevant to check-out business, such as an item price and the dealings sum total, considered as composition which functions considering the retail terminal 10 as a POS terminal may be displayed.

[0027]The display monitor 20 may be a known touch screen monitor which can generate a data signal, when a user touches a field with a screen. This data signal is told to the main controller board 20 through the data communication line 92. By such composition, he has to understand that commutative operation of the retail terminal 10 is attained. For example, the retail terminal 10 may be constituted as a commutative customer support terminal, and in that case, a user touches the specific field of the touch screen attached to the display monitor 20, and inputs an information claim by it. Next, the result of this claim is displayed visually and/or auditorily by the display monitor 20 and/or the speaker assembly 16.

[0028]LAN card 66 is formed in order to realize radio between the retail terminal 10 and a network system of the retail store concerned like the local area network (LAN) 94. LAN card 66 may be which thing of the known radio network cards of a large number like a PCMCIA card. The core module assembly 12 must also understand being combined with LAN94 by connection connection like known association stranded wire connection. Especially the main controller board 22 may be coupled directly with LAN94 via connection connection like LAN cable 96 combined with the LAN connector 24. Such connection connection to LAN94 must understand giving high transmission speed compared with the wireless connection through LAN card 66.

[0029]The movement detector 68 is combined with the main controller board 22 via the signal line 98. The movement detector 68 is formed in order to detect a user's existence in the proximity region of this retail terminal 10. When a user approaches the proximity region of the retail terminal 10 especially, the movement detector 68 emits an output signal and this is transmitted to the main controller board 22. The main controller board 22 video and/or an audio succession phenomenon, respectively Next, the display display 20 and -. Or it is made to perform in the stereo speaker assembly 16, and may be made for it to draw a user's attention to the retail terminal 10.

[0030]The movement detector 68 must understand that it is also possible to use it in order to promote the energy conservation by the retail terminal 10. Especially the retail terminal 10 may be operated so that some parts attached to it may go into the post-"dormancy" mode of a certain disused period. When a user approaches the proximity region of the retail terminal 10, the movement detector 68 may be used "so that the retail terminal 10 may be awoke." The movement detector 68 may contain which thing of the known movement detectors of a large number like a photoelectric detector.

[0031]The main controller board 22 is combined with the hard drive device 72 via the data bus 100. The main controller board 22 must understand that it is also possible to constitute so that the data storage demand may be provided in one of the remote positions, for example, the network part article of attachment in LAN94. Since such remote preservation of data enables removal of the hard drive device 72 from the mainboard assembly 48, it makes the number of the parts contained in the retail terminal 10 decrease. Reduction of such parts lowers the cost relevant to the retail terminal 10.

[0032]The main controller board 22 is combined with the scanner device 80 via the data cable 102 combined with the scanner connector 36. This scanner device 80 usually scans or reads a code for specific like a display of a universal product code (UPC), an industry mark (singular number or plurality), an alphabet numeric character (singular number or plurality), or others relevant to the items purchased. The scanner 80 contains the rotary mirror (not shown) driven by light source (not shown) like laser, and a motor (not shown), and a mirror array (not shown). At the time of operation, it is reflected from a rotary mirror and a mirror array, and a laser beam

generates a scanning beam pattern. If the code for specific on a certain item passes through the neighborhood of this scanner device 80, scanning beams will be scattered about from that code, will return to the scanner device 80, and will be collected and detected there. Next, this catoptric light is analyzed electrically and it is defined whether that catoptric light contains the just code pattern for specific. a just code pattern exists -- if it becomes, the code for specific will be changed into price information next -- it -- next, it is used for deciding the price of the item in a known way.

[0033]The main controller board 22 may be electrically combined with the external display monitor 74 via the video cable 104 combined with the video connector 28 again. This external display monitor 74 may be used for displaying a video image or a training film for a purpose like a goods demonstration. By using the external display monitor 74, it becomes possible to display a video image on a bigger area compared with the retail terminal 10 displaying a picture only with the display monitor 20. This external display monitor 74 may be VGA, the Super VGA monitor, or which a known display monitor like a known television set.

[0034]Furthermore, the main controller board 22 may be combined with the printer 76 via the printer cable 106 combined with the printer connector 32. This printer 76 may be used for printing a receipt etc., for example, when the retail terminal 10 is constituted as a POS terminal, Or for example, when the retail terminal 10 is constituted as a sales information terminal, it may use for printing a coupon, RESHYPE, etc. The printer 76 may be which a known printer, for example, may be laser, a dot matrix, or a heating type printer.

[0035]Furthermore, the main controller board 22 may be electrically combined with the keyboard 78 via the data cable 108 combined with the keyboard connector 34. The keyboard 78 may be used for inputting data into the terminal at the time of programming of the retail terminal 10, or its composition, for example. The keyboard 78 may be used for inputting a user's response to the question displayed on the display monitor 20. The keyboard 78 may be which a known PC keyboard like P/S2 keyboard.

[0036]Furthermore, the main controller board 22 may be electrically combined with the external speaker assembly 82 via the speaker cable 110 combined with the external speaker connector 38. The external speaker assembly 82 is incorporated as some headphone, and a user may enable it to hear individually an audio message like the audio portion of an employment member training movie by it. Furthermore, as another method, the external speaker assembly 82 is a loud speaker of a couple, and may be incorporated as a loud speaker of a couple installed in the place distant from the retail terminal 10.

[0037]Since the elasticity of the main controller board 22 is increased, the connector 30 is formed. As for especially the connector 30, it is preferred that the peripheral equipment which is constituted as a general-purpose serial bus (USB) if it can do, and supports a USB-data transmitting protocol by it becomes combinable there. The main controller board 22 and the connector 30 must understand that it is possible to constitute instead of a USB-data communication protocol so that various kinds of other data-communications protocols may be suited. For example, the connector 30 may be constituted so that a known serial or parallel-data communications protocol may be supported.

[0038]The POS card 410 of the main controller board 22 is electrically combined with the cash cash-drawer machine 508 via the data cable 514 combined with the cash drawer machine connector 412. The cash drawer machine 508 may be used for holding cash when the retail terminal 10 is constituted as a POS terminal, for example. The cash drawer machine 508 may be which cash drawer machine of the known controlled electrically.

[0039]The POS card 410 of the main controller board 22 may be further combined with the display monitor 510 (see Drawing 1 and Drawing 2 further) for customers electrically via the video cable 516 combined with the display monitor connector 414 for customers. The display monitor 510 for customers may use for displaying sales information like a customer's goods-purchased eye price, for example, when the retail terminal 10 is constituted as a POS terminal. Therefore, in using the retail terminal 10 as a care nature POS terminal. It is made to display transaction information on the display screen which is attached to the display monitor 20 of the core module assembly 12 for a store employee, and may be made to display transaction information on the display screen which is attached to the display monitor 510 for customers for a customer on the other hand. The display monitor 510 for customers may be which thing of the known display

monitors like a cathode-ray tube (CRT) monitor or a liquid crystal (LCD) display monitor.

[0040]As shown in Drawing 15 from Drawings 4th [ the ], 5, and 7, the main controller board 22 is stored into the thermally conductive case 430. The mainboard assembly 48 contains the plate 554 for attachment further. Since the thermally conductive case 430 is fixed to the display monitor 20, the plate 554 for attachment is formed. As shown in Drawing 13, the case 430 includes the heat transport structure 432. This heat transport structure 432 includes the side attachment wall 434 and the U form extension passage 436. The side attachment wall 434 defines the opening 430 in collaboration with some side attachment walls 438, 440, and 442, and the approach to some parts 420 stored in case 430 inside, for example, a microprocessor, is attained through this opening. Each side attachment walls 438, 440, and 442 provide the fixing faces 450, 452, and 454 in the inside, respectively (refer to the 4th figure).

[0041]The back cover 46 defines a heat distribution member with the heat distribution plate 470. The heat distribution member 470 makes the extended overhang 444 project. The overhang 444 is received by the extension passage 436 and provides the efficient heat path for distributing the heat which the various integrated circuit devices which are attached to the microprocessor 420 and the other main controller boards 22 by it generate. Especially the back cover 46 can be positioned between non-displacement positions (it illustrates to Drawing 9th [ the ] and 10) (it illustrates to 7th, 8, and 9 figure). When the back cover 46 is installed in a displacement position, the overhang 444 is turned to the wall 448 of the extension passage 436, or it is displaced and it forms an efficient heat interface among both by doing so so that the wall 448 may be contacted. When it says still more finely, the extension passage 436 is constituted so that it may become non-parallel relations, if the wall has or carries out another word of the angle to the side attachment wall 434 of the case 430 (refer to the 15th figure). Therefore, as shown in Drawing 8, the outer wall 468 of the overhang 444 defines 1st flat-surface  $P_T$ , and, on the other hand, the wall 448 of an extension passage defines 2nd flat-surface  $P_C$ .

[0042]In [ if the overhang 444 of the back cover 46 is advanced to the inside of the extension passage 436, the back cover 46 will be positioned in a non-displacement position at first, and ] there, Flat-surface  $P_T$  defined by the overhang 444 is substantially parallel to flat-surface  $P_C$  defined by the extension passage 436. When the back cover 46 is installed in a non-displacement position, he has to understand that the fixing faces 450, 452, and 454 of the case 430 are separated from the fixing faces 456, 458, and 460 corresponding, respectively defined as the back cover 46 (refer to the 10th figure). When the back cover 46 is turned in the direction of the arrow 462 of Drawing 9 as a whole on the other hand, Or if another word is carried out, when being moved in the direction, if the overhang 444 moves or another word is carried out toward the wall 448 of the extension passage 436, contact with a wall will be urged to it, and to eye others. Flat-surface  $P_T$  defined by the overhang 444 serves as non parallel substantially to flat-surface  $P_C$  defined by the extension passage 436. Some puncturing in which some braces [ like ] which are furthermore the bolts 464 are provided in the fixing faces 456, 458, and 460 of a back cover, Some thread groove puncturing provided in the fixing faces 450, 452, and 454 of the case 430, respectively may be penetrated and advanced, and the fixing faces 456, 458, and 460 of a back cover may be fixed to the fixing faces 450, 452, and 454 of the case 430 by it, respectively. If the back cover 46 is moved to a displacement position, the round end 466 provided in the overhang 444 will be displaced so that the wall 448 of the extension passage 436 may be contacted (Drawing 8).

[0043]If the back cover 46 is furthermore moved to a displacement position, the proximal edge 590 provided in the overhang 444 will be displaced so that the wall 592 of the extension passage 436 may be contacted (Drawing 8). Therefore, if the back cover 46 is held to a displacement position using the bolt 464, a part of spherical end 466 and some outer walls 468 will maintain contact with the wall 448 of the extension passage 436, and, on the other hand, a part of proximal edge 590 will maintain contact with the wall 592 of the extension passage 436. Such composition must understand forming an efficient heat path between the overhang 444 and the extension passage 436, when maintaining a back cover at a displacement position.

[0044]As mentioned above, unless the back cover 46 moves the back cover 46 to a displacement position and it is fixed with the bolt 464 after that, a non-displacement position will be taken. Such composition serves as a use security for careless for preventing operating the retail terminal 10, not fixing the back cover 46 to the case 430 enough. In order to approach especially the parts

stored in case 430 inside, when an engineer etc. remove the back cover 46, the back cover 46 does not take a displacement position until an engineer attaches a bolt again. Therefore, since this serves as a visual indicator for an engineer, it falls thru/or removes the frequency of the opportunity for the core module assembly 12 to be accidentally operated without sufficient heat distributed function.

[0045]When the back cover 46 is installed in a displacement position, the heat distribution plate 470 of the back cover 46 is installed on the opening 446 so that the parts stored in case 430 inside may be covered. The heat distribution plate 470 provides some ventilation openings 560 in the inside, and, on the other hand, the side attachment wall 442 provides some slits 594 for ventilation in an inside. The atmosphere can penetrate the ventilation opening 560 and can cool the parts 420 inside a case, for example, a microprocessor, by it. Then, the heated air is exhausted from a case through the slit 594 for ventilation.

[0046]The heat generated by the microprocessor 420 at the time of operation of the core module assembly 12 is transported to the side attachment wall 434 via the heat suction assembly 472. The heat suction assembly 472 includes heat transport structure thru/or the block 474, the thermally conductive pad 476 of a couple, and the heat block clamp 478. If the heat block 474 can be performed, it is preferred to be formed with a thermally conductive material like an aluminum alloy, and it contains the body part 480 and the key part 482. As shown in Drawing 12, the key part 482 is projected from the body part 480, and provides the fixation hole 484 in the inside.

[0047]The key part 482 of the heat block 474 restricts a mutual relative motion in collaboration with the side attachment wall 434. Especially the side attachment wall 434 provides the slit 486 for keys in the inside. The key part 482 is positioned at the inside of this slit 486 for keys, and the relative motion between the heat block 474 and the side attachment wall 434 is restricted by it. Braces like the bolt 488 are advanced to the inside of this slit for keys, and it may be made to fit in after that via the braces puncturing 484 and the thread groove which were provided in the inside of the key part 484 of the heat block 474 (refer to the 14th figure). If the heat block 474 is drawn to the direction of the side attachment wall 434 or another word is carried out by rotating the bolt 488 in the direction of the arrow 490 of Drawing 14 as a whole, it will be advanced to the direction of the side attachment wall.

[0048]As shown in Drawing 12th [ the ] and 13, the thermally conductive pad 476 is inserted between the heat block 474 and the side attachment wall 434. Each heat-conduction pad 476 has an adhesive property in the whole surface, and makes it easy that a pad is fixed by it to the end piece 492 of the heat block 474. When the bolt 488 is rotated in the direction of the arrow 490 of Drawing 14 as a whole, the heat-conduction pad 476 will be compressed between the end piece 492 of the heat block 474, and the side attachment wall 434. Especially the thermally conductive pad 476 uses an elastomeric material as a raw material. This is because it is compressed between the end piece 492 of the heat block 474, and the side attachment wall 434 at the time of rotation of the bolt 488. It uses as the heat-conduction pad 476 of this invention, and one type of being suitable of elastic and a thermally conductive pad is a T-pli 220-A1 thermal-conductivity intervention pad, and this is marketed from Thermagon of Cleveland, Ohio, U.S.

[0049]At the time of rotation of the bolt 488, the thermally conductive pad 476, Even if it is compressed to the limit defined beforehand, therefore is attached to the parts of the mainboard assembly 48 and there is dispersion in the size tolerance of a thing, an efficient heat path will be formed between the heat block 474 and the side attachment wall 434. In particular, at the time of rotation of the bolt 488, the heat block 474 is advanced toward the side attachment wall 434, and it continues until the head 494 of the bolt 488 contacts the key part 482 and the outside surface 496 of the side attachment wall 434. Thus, even if it is attached to the heat block 474 or the side attachment wall 434 and dispersion in the size tolerance of a thing is between the heat block 474 and the side attachment wall 434 by compressing the heat-conduction pad 476, he has to understand that an efficient heat path is formed.

[0050]The clamp 478 forces the heat block 474 to contact the microprocessor 420 to be shown in the 12th and 13 figure. Especially this microprocessor 420 is fixed to the inside of the attachment socket 502. The clamp 478 provides some slits 498 for a lock in the inside, and they force the heat block 474 according to the direction of the socket 502 in collaboration with the tab 500 for a lock defined in the attachment socket 502 to go to the direction of the microprocessor 420. On the

other hand, in order to promote the divagation of the heat block 474 at the time of rotation of the bolt 488, the microprocessor 420 arranges the thermally conductive grease 504 on the upper surface 506 (refer to the 12th figure). With this thermally conductive grease 504, the take-off run of the heat block 474 is attained, maintaining an efficient heat interface to the upper surface 506 of the microprocessor 420. It uses as the heat grease 504 of this invention, and one suitable type of heat grease is a type 120 thermal-bond part compound, and this is marketed from U.S. Massachusetts state Wakefield Wakefield Engineering.

[0051]From the above, the heat generated by the microprocessor 420 at the time of operation of the core module assembly 12, It distributes through the heat path containing the heat grease 504, the heat block 474, the thermally conductive pad 476, the side attachment wall 434, the extension passage 436, the overhang 444, and the heat distribution plate 470 of the covering 46. This heat path demonstrates the heat dispersion power relatively strengthened compared with the heat distribution assembly designed conventionally.

[0052]The retail terminal 10 may be constituted by some different gestalten, and it may be constituted so that the selling function of various a large number can be performed by it. In order to perform the thing of such a selling function of a certain kind, it is needed to make the core module assembly 12 incline selectively. The leaning device 56 is the core module assembly 12 to the install stand 58 on the basic assembly 18, therefore enables such the display monitor's 20 inclination again. Therefore, at the time of operation of the retail terminal 10 a user (for example, store employee in the case of a care nature selling function), It will change, if movement or another word of the position of the core module assembly 12 is carried out to the install stand 58, and the terminal 10 can be used now still more conveniently by it.

[0053]As shown in Drawing 20 from Drawing 16, the leaning device 56 includes the cone cage 112 of a couple, the ratchet member 114 of a couple, the attachment implement 116 of a couple, and the end cap 118 of a couple. Some ratchet gear teeth 120 provided in the inside of the ratchet member 114 so that it may discuss still in detail to the following, It fits in with some ratchet gear teeth 122 defined into the supporting structure 124 of the leaning device 56, and if a lock or another word of the core module assembly 12 is carried out to one of some relative positions to the install stand 58 of the basic assembly 18 by it, it fixes.

[0054]The ratchet member 114 is inserted between the attachment implement 116 and the cage 112. Especially each ratchet member 114 contains the spring arm 132 of a couple which attaches to the 1st end and has the pin 134. The 2nd end 132 of a spring arm is fixed to the base part 136 which provides the ratchet gear tooth 120 in the inside. The 1st end of each attachment pin 134 is accepted by each pin puncturing 138 provided in the attachment implement 116, and, on the other hand, the 2nd end of the attachment pin 134 is accepted by each puncturing 140 of the cage 112. If the attachment pin 134 is fixed in this way, the spring arm 132 is compressed, by it, the base part 136 will follow and the ratchet gear tooth 120 will be energized in the direction of the arrow 144 at the whole toward the infeed 142 provided in the cage 112.

[0055]Once it is constructed in this way, the braces of a couple, for example, a bolt and a screw (not shown), The opening 146 of the couple provided in the attachment implement 116 is penetrated and advanced, it fits in after that via the opening 148 and thread groove of a couple which are provided in the cage 112, and the attachment implement 116 is fixed to the cage 112 by it. Both attachment implements 116 are inserted into both cages 112, the ratchet member 114 is pinched between them, and the left attachment sub assembly 150 and the right direction attachment sub assembly 152 are defined by fixing.

[0056]As shown in Drawing 17, the structure base material 124 has the center aisle 158 which is fixed to the install stand 58 and penetrates the body. This center aisle is made to penetrate braces like the bolt 154, and it may be made to fix the left attachment sub assembly 150 to the right direction attachment sub assembly 152 by it. Especially the bolt 154 penetrates and advances first puncturing 156 provided in the cage 112 of the left attachment sub assembly 150, and penetrates and advances the center aisle 158 after that. puncturing (the refer toA [ 20 ] figure) in which the bolt 154 will be provided by the cage 112 of the right direction attachment assembly 152 once it penetrates the center aisle 158 -- next, some washers 162 are penetrated and carried forward. The nut 164 fits into this bolt 154 via a thread groove. The left attachment sub assembly 150 must understand being energized in the direction of the arrow 166 of Drawing 17 on the whole as the nut 164 is bound tight.

[0057]To the supporting structure 124, each cage 112 is positioned by motion of the attachment sub assemblies 150 and 152 which were mentioned above so that the relative movement of these attachment sub assemblies 150 and 152 may be promoted. If it states still in detail, each cage 112 of the leaning device 56 will define the pivot structure 386. The cage 112 of the left sub assembly 150 provides the method bearing surface 170 of outside in the inside, and, on the other hand, the cage 112 of the right direction sub assembly 152 provides the method bearing surface 172 of outside in the inside. The pivot structure 386 cooperates with each pivot structure 390 provided in the supporting structure 124. Especially the supporting structure 124 has the receptor 392 of a couple in the inside. The receptor 392 provides the inner direction bearing surfaces 174 and 176 of a couple in the inside, as shown in Drawing 17. The method bearing surfaces 170 and 172 of outside provided in the cage 112, It is supported by the inner direction bearing surfaces 174 and 176 provided in the supporting structure 124, respectively, and a motion of the cage 112 is made easy by doing so, therefore a relative motion of the supporting structure 124, therefore the attachment sub assemblies 150 and 152 to an install stand is made easy. The nut 164 must understand it that it is also possible to bind only a specific amount tight to be the bearing surfaces 170 and 172 of the cage 112, respectively so that friction of a specific amount may be produced among the bearing surfaces 174 and 176 of the supporting structure 124.

[0058]If the attachment sub assemblies 150 and 152 are fixed to the supporting structure 124 as mentioned above, the core module assembly 12 may once be fixed to the install stand 18 using the attachment implement 116. Especially the back enclosure 44 of the core module assembly 12, Have the puncturing 126 with a thread groove of a couple in the inside (refer to the 4th figure), and, on the other hand, the back cover 46, The puncturing 248 of a couple is provided in that inside, and this puncturing 248 is equal to the puncturing 250 and the same axle of a couple which are provided in the fixing face 450 of the case, when the back cover 46 is attached to the thermally conductive case 430 (refer to the 4th figure). Each attachment implement 116 provides the flanges 128 and 256 of a couple in the inside. The flange 256 contains the comparatively flat portion 258 and the key portion 260. The extended slot 130 is provided in each flange 128, and, on the other hand, the puncturing 262 is provided in the flat part 258 of each flange 256. In order to fix the core module assembly 12 to the metal fittings 116, the overhang section 252 of the side attachment wall 438 positions this core module assembly 12 to the metal fittings 116 so that it may fuse with the key portion 260 of the flange 256 in which it is provided by the metal fittings 116. Then, it advances, and it ranks second and the braces (not shown) of the 1st couple like a bolt are made to penetrate the extended slot 130 and to fit into the puncturing 126 with a thread groove via a thread groove.

[0059]Advance the braces (not shown) of the 2nd couple like a bolt through the puncturing 262 next, fit into the puncturing 248 and 250 provided in the back cover 46 and the fixing face 450 via a thread groove after that, respectively, and by it. The core module assembly 12 is attached and it fixes to the basic assembly 18 according to the ingredient 116. As mentioned above, he has to understand that the attachment implement 116 defines the attachment structure for fixing the core module assembly 12 to the pivot structure assembly 18 as a whole.

[0060]The core module assembly 12 can be positioned and held to either of some positions by using the ratchet member 114. In particular, as mentioned above, the nut 164 must understand it that it is also possible to bind only a specific amount tight to be the bearing surfaces 170 and 172 of the cage 112, respectively so that friction of a specific amount may be produced among the bearing surfaces 174 and 176 of the supporting structure 124. On the other hand, the weight of the core module assembly 12, In the size, it is larger than friction produced by the bearing surfaces 170 and 172 and the interaction between 174 and 176, respectively, therefore a core module assembly's carrying out axial rotation or relative movement [ as opposed to / if another word is carried out / the supporting structure 124 ] is made possible. On the other hand, by compression of the spring arm 132 of the ratchet member 114 produced during an assembly of the attachment sub assembly 150, the base part 136 follows and the ratchet gear tooth 120 is energized in the direction of the arrow 144 of Drawing 19 at the whole. It is energized in this way and the ratchet gear tooth 120 fits into the ratchet gear tooth 122 provided in the supporting structure 124.

[0061](1) The power generated by the compression spring arm 132 of the ratchet member 114, (2) -- the power relevant to friction produced by the bearing surfaces 170, 172, and 174 and the

interaction between 176, respectively, [ and ] [ \*\* and ] Since the size is larger than the weight of the core module assembly 12, The core module assembly 12 must understand carrying out axial rotation or preventing the thing which receive the supporting structure 124, therefore the basic assembly 18 and which is moved relatively, if another word is carried out. However, if a user etc. want to make the position of the core module assembly 12 into a different position, a user, What is necessary is just to energize as a whole in the direction of either of the arrow 180 of Drawing 1, or the arrow 182, if the core module assembly 12 is pushed, it lengthens or another word is carried out. In a size the energization which is made such and given to the core module assembly 12, the holding power generated by the compression spring arm 132 -- and -- respectively -- the bearing surfaces 170, 172, and 174 and friction between 176 -- also depending -- large -- if it kicks -- the base part 136 -- therefore, the ratchet gear tooth 120 is energized in the direction of the arrow 184 of Drawing 19 as a whole.

[0062]When the base part 136 is energized in this way, from the ratchet gear tooth 122, the ratchet gear tooth 120 separates and by it. The cage 112 follows and it becomes possible that the core module assembly 12 carries out axial rotation or to move relatively to the basic assembly 18, if another word is carried out. Once a user stops the energization to the core module assembly 12, the ratchet gear tooth 120 fits in with the ratchet gear tooth 122 again, and locks the core module assembly 12 in a current position by it.

[0063]As shown in Drawing 20 from Drawing 19, each cage 112 provides the tab 188 for a lock of a couple in the inside, and, on the other hand, each end cap 118 provides the extended slot 190 of a couple in the inside. The tip 192 provided in each tab 188 for a lock is accepted by the extended slot 190. The method of outside is displaced with the spring from the center of the cage 112 in the radial direction, therefore the tab 188 for a lock must be displaced to the method of outside in the tip 192 in a radial direction, and must understand fixing the tip 192 movable in the extended slot 190 by it. Therefore, the end cap 118 is fixed to the cage 112 movable. Especially the end cap 118 can be rotated in the direction of the arrows 194 and 196 of Drawing 19 as a whole by passing the moving trucking defined by the extended slot 190.

[0064]Especially the end cap 118 of the right direction attachment sub assembly 152 can be rotated by the verge 198 of the tab 188 for a lock to the point of contacting the side attachment wall 200 of the extended slot 190, in the direction of the arrow 194 of Drawing 19 as a whole. On the contrary, the end cap 118 of the right direction attachment sub assembly 152 can be rotated by the verge 202 of the tab 188 for a lock to the point of contacting the side attachment wall 204 of the extended slot 190. He has to understand that the end cap 118 of the left attachment sub assembly 150 is pivotable similarly.

[0065]Thus, rotating the end cap 118 will lock the core module assembly 12 selectively in a favorite relative angle to the basic assembly 18 (or lock release). Especially this leaning device 56 includes the position locking mechanism 380 further. This mechanism 380 follows the core module assembly 12, and since the display monitor 20 is selectively locked at a favorite angle to the install stand 58 of the basic assembly 18 (or lock release is carried out), it is formed. The position locking mechanism 380 includes the holding structure 382 provided in each end cap 118. the -- as shown in 20A andB [ 20 ] figure, the holding structure 382 contains the outside guide member 206 and the inside guide member 208. Each ratchet member 114 provides the pin 186 for a lock in the inside. Rotation of the end cap 118 moves the holding structure 382 selectively between a locked position and an open position. Especially the rotation to the direction of the arrow 210 of the 20th the B figure as a whole of the end cap 118 (namely, as a whole the direction of the arrow 194 of 19 figure) puts the holding structure 382 on a locked position. That is, in there, the lock pin 186 is held, or if another word is carried out, it will be caught in the slot 384 (the 20B the solid line of a figure shows like) for a lock defined by the outside guide member 206 and the inside guide member 208.

[0066]When the lock pin 186 is caught in this way, firmly, the ratchet gear tooth 120 will fit into the ratchet gear tooth 122, and by it. The relative motion to the install stand 58 of the basic assembly 18 of the attachment implement 116, therefore the core module assembly 12 is prevented. On the contrary, the rotation to the direction of the arrow 212 of (B) of Drawing 20 (namely, as a whole the direction of the arrow 196 of 19 figure) puts the holding structure 382 on an open position as the whole end cap 118. That is, in there, it is displaced by a cam, or if another word of the lock pin 186 is carried out, it will be energized by the radial direction inner side toward the center of the

end cap 118, and will keep away the lock pin 186 from the slot 384 for a lock by it (the imaginary line of (B) of 20 figure shows like). Energization of the inner direction of such a lock pin 186, The base part 136 of the ratchet member 114 is made similarly energized inside toward the center of the end cap 118, therefore if it separates from the ratchet gear tooth 120 from the ratchet gear tooth 122 and another word is closed or carried out, it will keep away. The desorption from the ratchet gear tooth 122 of the ratchet gear tooth 120 promotes the relative motion to the install stand 58 of the basic assembly 18 of the mounting hardware 116, therefore the core module assembly 12.

[0067]Next, if Drawing 24 is referred to from Drawing 21, the right direction attachment sub assembly 518 which is the 2nd embodiment of the attachment sub assembly of this invention is shown. This right direction attachment sub assembly 518 resembles the right direction sub assembly 152 a little. Then, in Drawing 24, the reference number same for nominating common parts as what was mentioned above in relation to Drawing 20 from Drawing 1 is used from Drawing 21. In Drawing 24 from Drawing 21, in this specification, only the right direction attachment sub assembly 518 is shown, however the same attachment sub assembly must understand being used also for the left-hand side of the pivot rotation basic assembly 18.

[0068]Instead of the ratchet member 114 and the end cap 118, the right direction attachment sub assembly 518 includes the ratchet member 520 and the end cap 522. The right direction attachment sub assembly 518 contains the lock member 524 further. The ratchet member 520 of the ratchet member 520 is almost the same as the ratchet member 114 except for not providing the lock pin 186 in an inside. The end cap 522 of the end cap 522 is almost the same as the end cap 118 except for providing the hub 526 (refer to the 22nd figure) for a lock in the inside instead of providing the outside guide member 206 and the inside guide member 208 of holding structure in the inside. As shown in the (A) figure of Drawing 21 and 22 figure, the lock member 524 is positioned so that the outside surface 536 may contact the inner surface of each spring arm 132 of the ratchet member 520.

[0069]The core module assembly 12 can be positioned and held by using the ratchet member 520 like the case of the right direction attachment sub assembly 152 at either of some positions. In particular, as mentioned above, the nut 164 must understand it that it is also possible to bind only a specific amount tight to be the bearing surfaces 170 and 172 of the cage 112, respectively so that friction of a specific amount may be produced among the bearing surfaces 174 and 176 of the supporting structure 124. On the other hand, the weight of the core module assembly 12, Rather than friction produced by the bearing surfaces 170 and 172 and the interaction between 174 and 176, respectively, in the size, it is large and to eye others. It makes it possible that the core module assembly 12 carries out axial rotation or to move relatively to the supporting structure 124, if another word is carried out. On the other hand, by compression of the spring arm 132 of the ratchet member 520 produced during inclusion of the attachment sub assembly 518, the base part 136 follows and the ratchet gear tooth 120 of the ratchet member 520 is energized in the direction of the arrow 528 of Drawing 21 at the whole. It is energized in this way and the ratchet gear tooth 120 fits into the ratchet gear tooth 122 provided in the supporting structure 124.

[0070](1) The power generated by the compression spring arm 132 of the ratchet member 520, (2) -- the power relevant to friction produced by the bearing surfaces 170, 172, and 174 and the interaction between 176, respectively, [ and ] [ \*\* and ] Since the size is larger than the weight of the core module assembly 12, The core module assembly 12 must understand carrying out axial rotation or that moving relatively to the install stand 58 of the supporting structure 124, therefore the basic assembly 18 will be prevented if another word is carried out. However, if a user etc. want to make the position of the core module assembly 12 into a different position, a user, What is necessary is just to energize as a whole in the direction of either of the arrow 180 of Drawing 1, or the arrow 182, if the core module assembly 12 is pushed, it lengthens or another word is carried out. The power generated by the user when making it such and energizing the core module assembly 12, In a size, the holding power generated by the compression spring arm 132 and the bearing surfaces 170, 172, and 174 and friction generated among 176, and a twist are also large respectively, and to eye others. The base part 136 is followed and the ratchet gear tooth 120 is energized in the direction of the arrow 530 of Drawing 21 as a whole.

[0071]When the base part 136 is energized in this way, from the ratchet gear tooth 122, the ratchet gear tooth 120 separates and by it. The cage 112 follows and it becomes possible that the

core module assembly 12 carries out axial rotation or to move relatively to the basic assembly 18, if another word is carried out. Once a user stops the energization to the core module assembly 12, the ratchet gear tooth 120 fits in with the ratchet gear tooth 122 again, therefore the core module assembly 12 is locked by the current position.

[0072]The end cap 522 also provides the extended slot 190 of a couple in the inside like the end cap 118. The tip 192 provided in each tab 188 for a lock of the cage 112 is accepted by this extended slot 190. To a radial direction, the method of outside is displaced with the spring from the center of the cage 112 in the radial direction, therefore the tab 188 for a lock is displaced to the method of outside for the tip 192, and by it. He has to understand fixing the tip 192 movable in the extended slot 190 of the end cap 522. Therefore, the end cap 522 is fixed to the cage 112 movable. Especially the end cap 522 can be rotated in the direction of the arrows 532 and 534 of Drawing 21 as a whole via the moving trucking defined by the extended slot 190.

[0073]Especially the end cap 522 of the right direction attachment sub assembly 518 can be rotated by the verge 198 of the tab 188 for a lock to the point of contacting the side attachment wall 200 of the extended slot 190, in the direction of the arrow 532 of Drawing 21 as a whole. On the contrary, the end cap 522 of the right direction attachment sub assembly 518 can be rotated by the verge 202 of the tab 188 for a lock to the point of contacting the side attachment wall 204 of the extended slot 190. He has to understand that the end cap 118 of a left attachment sub assembly (not shown) is pivotable similarly.

[0074]Thus, by rotating the end cap 522, the core module assembly 12 will be selectively locked by the favorite relative angle to the basic assembly 18 (or lock release). Especially the hub 526 for a lock cooperates with the member 18 for a lock, follows the core module assembly 12, and locks the display monitor 20 selectively at a favorite angle to the install stand 58 of the basic assembly 18 (or lock release is carried out). Especially the hub 526 for a lock provides some projections 540 in the inside (refer to (B) of Drawing 22). The lock member 524 provides the projection 542 in the inside (refer to the 21st figure). Rotation of the end cap 522 moves the lock member 524 selectively between a locked position and an open position. Especially The rotation to the direction of the arrow 544 of the 23rd and 24 figure as a whole of the end cap 522 (namely, as a whole the direction of the arrow 532 of 21 figure), Or the rotation to the direction of the arrow 546 of the 23rd and 24 figure (namely, as a whole the direction of the arrow 534 of 21 figure) puts the lock member 542 on a locked position selectively.

[0075]That is, in there, the projection 542 is held, or if another word is carried out, it will be caught by (be shown in Drawing 24) between the projections 540 of the hub 525 for a lock. If the projection 542 is caught in this way, it is displaced, or if another word of the member 524 for a lock is carried out, it will be contacted [ the contact-carrying member 550 of the couple which it is energized in the direction of the arrow 548 of the 23rd the 24 figure as a whole, therefore is provided in the inside ] to the base part 136 of the ratchet member 520. By contact with such a base part 136, firmly, the ratchet gear tooth 120 is made to fit in by the ratchet gear tooth 122 of the supporting structure 124, and by it. The relative motion to the install stand 58 of the basic assembly 18 of the attachment implement 116, therefore the core module assembly 12 is prevented. On the contrary, the rotation to the direction of either of the arrow 544 or 546 of the 23rd the 24 figure as a whole of the end cap 522 puts the lock member 524 on an open position selectively. That is, in there, if the projection 542 is kept away from the field between the projections 540 of the hub 526 for a lock or another word is carried out, it will be canceled (as illustrated to Drawing 23).

[0076]When the projection 542 is canceled in this way, freely, the lock member 524 becomes movable in the direction of the arrow 552 of the 23rd the 24 figure as a whole, and by it. If the ratchet gear tooth 120 separates from the ratchet gear tooth 122 or carries out another word, he has to understand that it becomes possible to keep away. The desorption from the ratchet gear tooth 122 of the ratchet gear tooth 120 makes easy the relative motion to the install stand 58 of the basic assembly 18 of the mounting hardware 116, therefore the core module assembly 12.

[0077]Next, if Drawing 39 is referred to from the 1st to 2 figure, and Drawing 25, the retail terminal 10 of various gestalten is shown. The pivot rotation basic assembly 18 may use the core module assembly 12, although [ like a substantially level attachment side (refer to the 1st figure) like desk 214, or the wall 216 / which is substantially fixed to a vertical attachment side (refer to the 26th figure) in axial rotation ]. Especially the retail terminal 10 may be fixed to desk 214 with the

attachment plate 218. This attachment plate 218 is provided with some tabs 220 for attachment, and, on the other hand, the stand attachment structure thru/or the plate 222 of the basic assembly 18 provides some slots 224 for attachment in that inside. The attachment plate 218 provides some fixed puncturing 226 in the inside further. This puncturing 226 for immobilization is formed in order to strengthen immobilization in desk 214 of the attachment plate 218. In particular, penetrate and advance each fixed puncturing 226, a bolt thru/or braces like the screw 408 are made to fit into the corresponding fixed puncturing 402 provided in desk 214 via a thread groove after that, and the attachment plate 218 is fixed to desk 214 by it.

[0078]Then, in harmony with the slot 224 for attachment, the tab 220 for attachment attaches the base plate 222 of the basic assembly 18, and fixes to the plate 218. Especially the basic assembly 18 (including the core module assembly 12 fixed to it), As a whole, it is advanced in the direction of the arrow 228 of Drawing 2 toward the attachment plate 218 (bolting is carried out to desk 214), and the tab 220 for attachment is equal to the slot 224 for attachment, and the same axle by it. Then, the basic assembly 18 is advanced in the direction of the arrow 228 further as a whole, and the tab 220 for attachment is accepted by it by the slot 224 for attachment. If the tab 220 for attachment is accepted by the slot 224 for attachment, once the basic assembly 18, If it is energized in the direction of the arrow 230 or another word is carried out to it as a whole, slide \*\*\*\* is carried out, the tab 220 for attachment is further carried forward to the locked position 232 of the slot 224 for attachment by it, and the tab 220 for attachment is locked by the inside by it.

[0079]The attachment plate 218 provides the flange 244 for a lock in the inside further (refer to the 27th figure). The basic assembly 18 equips the base plate 222 with the spring variability lock lever 370 held in axial rotation (refer to the 25th figure). This lock lever 370 prevents that the basic assembly 18 causes unexpected relative movement to the attachment plate 218. It is displaced in the direction of the arrow 372 of Drawing 2 as a whole by means of a spring, and especially the lock lever 370 is put on the locked position shown in Drawing 2. The lock lever 370 provides the cut 396 for a lock in the inside (refer to the 25th figure). If this lock lever 370 is put on a locked position, and the flange 244 for a lock will be caught by the cut 396 for a lock or will carry out another word to it, If it is held and the basic assembly 18 glides or carries out another word to unexpected by it, it will move and will prevent that the tab 220 for attachment separates from the slot 224 for attachment unexpectedly by it. On the contrary, when the lock lever 370 is moved as a whole in the direction of the arrow 398 of Drawing 2 by the user etc., the lock lever 370, A lock release position will be taken, and it dissociates from the cut 396 for a lock, or if the flange 244 for a lock carries out another word, it will be canceled by it.

[0080]The attachment plate 218 provides the opening 236 for cable operation in the inside further. The electrical cable (for example, the power cable 54 thru/or LAN cable 96) of a large number attached to the retail terminal 10 may be carried forward to the opening 562 in which it is provided by desk 214 through this opening 236 for cable operation through and after that. Once an electrical cable is accepted through the opening 236 for cable operation provided in the attachment plate 218, It may advance through one of the openings 64 for cable operation attached to the basic assembly 18, and may be made to combine with one of the electrical connectors 24, 26, 28, 30, 32, 34, 36, 38, 412, and 414 (refer to the 4th figure) attached to the core module assembly 12 after that. For example, LAN cable 96 may be carried forward through one of the opening 562 provided in desk 214, the opening 236 for cable operation provided in the attachment plate 218, and the openings 64 for cable operation provided in the basic assembly 18. Once it is accepted through the opening 64 for cable operation, it will be combined with the LAN connector 24 and the data connector 578 will combine the core module assembly 12 with LAN94 electrically by it. The power cable 54 contains the power connector 580 (refer to the 2nd figure).

[0081]The power cable 54 may be carried forward through one of the opening 562 provided in desk 214, the opening 236 for cable operation provided in the attachment plate 218, and the openings 64 for cable operation provided in the basic assembly 18. Once it is accepted through the opening 64 for cable operation, it will be combined with the electric power input connector 568 of the electric power supply machine 50 (refer to the 3rd figure), and the power connector 580 will combine the electric power supply machine 50 with the 110 VAC power supply 512 electrically by it. The middle power cable 52 Then, the power connector 26 of the core module assembly 12, It connects with both electric power output connectors 572 (refer to the 3rd figure) of the electric power supply machine 50, and the core module assembly 12 is electrically combined with the

electric power supply machine 50 by it.

[0082]Such composition must understand strengthening cable duct Osamu attached to the terminal 10, when the retail terminal 10 is fixed to desk 214. When the core module assembly 12 is especially fixed to the pivot rotary base assembly 18, the install stand 58, the covering 62, the attachment implement 116, and the core module assembly 12 define the protective case of the retail terminal 10 as a whole. the data cable (for example, LAN cable 96) portion and power cable (for example, power cable 54) portion which are prolonged besides the opening 562 of desk 214, and the opening 236 for cable operation of the attachment plate 218 -- the inside of the protection case of the basic assembly 18 -- "it is wrapped thoroughly."

[0083]Here "it being wrapped thoroughly" or the place which is referred to as "Wrapping thoroughly" and which carries out a definition, Any portion of an electrical cable (for example, a LAN cable and a power cable), If it does not extend outside the building envelope appointed by constituted part (namely, the install stand 58, the covering 62, the attachment implement 116, and the core module assembly 12) of a protection case or another word is carried out, it will be not exceeding a building envelope. Such a special feature is the method that an electrical cable may be removed from each connector, when the retail terminal 10 is fixed to desk 214, It is pulled by the user (namely, a customer or a store employee), or if another word is carried out, it is desirable at the point of preventing being contacted.

[0084]As shown in Drawing 26th [ the ] and 27, the retail terminal 10 may be fixed to the wall 216 with the attachment plate 218. The puncturing 226 for immobilization is formed in order to strengthen immobilization in the wall 216 of the attachment plate 218. It fits into the corresponding fixed puncturing 404 which advances the bolt 408 through each fixed puncturing 225, and is especially provided in the wall 216 via a thread groove after that, and the attachment plate 218 is fixed to the wall 218 by it.

[0085]Then, the tab 220 for attachment fixes [ as opposed to / therefore / the attachment plate 218 ] the stand plate 222 of the basic assembly 18 to the wall 216 in collaboration with the slot 224 for attachment. Especially the basic assembly 18 (the core module assembly 12 fixed to it is included), As a whole, it advances in the direction of the arrow 240 of Drawing 27 toward the attachment plate 218 (bolting is carried out to the wall 216), and is made equal [ the tab for attachment ] to the slot 224 for attachment by it at the same axle. Then, the basic assembly 18 is advanced in the direction of the arrow 240 further as a whole, and the tab 220 for attachment is accepted by it by the slot 224 for attachment. If the tab 220 for attachment is accepted by the slot 224 for attachment, once the basic assembly 18, If it is energized in the direction of the arrow 242 or another word is carried out to it as a whole, slide \*\*\*\* is carried out, the tab 220 for attachment is further carried forward to the locked position 232 of the slot 224 for attachment by it, and the tab 220 for attachment is locked by the inside by it.

[0086]As mentioned above, the lock lever 370 prevents the basic assembly 18 from causing unexpected relative movement to the attachment plate 218. It is displaced with a spring in the direction of the arrow 374 of Drawing 27 as a whole, and especially the lock lever 370 is put on a locked position. If the lock lever 370 is put on a locked position, and the flange 244 for a lock will be caught by the cut 396 for a lock provided in the lock lever 370 or will carry out another word to it, It is held, and it will move, and if the basic assembly 18 glides or carries out another word to unexpected by it, it will prevent so that the tab 220 for attachment may not separate from the slot 224 for attachment unexpectedly by it. On the contrary, when the lock lever 370 is moved as a whole in the direction of the arrow 400 of Drawing 27 by the user etc., the lock lever 370, A lock release position will be taken, and it is desorbed from the cut 396 for a lock, or if the flange 244 for a lock carries out another word, it will be canceled by it.

[0087]The electrical cable (for example, the power cable 54 thru/or LAN cable 96) of a large number attached to the retail terminal 10 may be carried forward to the opening 564 in which it is provided by the wall 216 through the opening 236 for cable operation through and after that. Once an electrical cable is accepted through the opening 236 for cable operation provided in the attachment plate 218, It may advance through one of the openings 64 for cable operation attached to the basic assembly 18, and may be made to combine with one of the electrical connectors 24, 26, 28, 30, 32, 34, 36, 38, 412, and 414 (refer to the 4th figure) attached to the core module assembly 12 after that. For example, LAN cable 96 may be carried forward through one of the opening 564 provided in the wall 216, the opening 236 for cable operation provided in

the attachment plate 218, and the openings 64 for cable operation provided in the basic assembly 18.

[0088]Once it is accepted through the opening 64 for cable operation, it will be combined with the LAN connector 24 and the data connector 578 will combine the core module assembly 12 with LAN94 electrically by it. The power cable 54 may also be carried forward through one of the opening 564 provided in the wall 216, the opening 236 for cable operation provided in the attachment plate 218, and the openings 64 for cable operation provided in the basic assembly 18. Once it is accepted through the opening 64 for cable operation, it will be combined with the electric power input connector 568 of the electric power supply machine 50 (refer to the 3rd figure), and the power connector 580 will combine the electric power supply machine 50 with the 110 VAC power supply 512 electrically by it. The middle power cable 52 Then, the power connector 26 of the core module assembly 12, It connects with both electric power output connectors 572 (refer to the 3rd figure) of the electric power supply machine 50, and the core module assembly 12 is electrically combined with the electric power supply machine 50 by it.

[0089]Such composition must understand strengthening cable duct Osamu attached to the terminal 10, when the retail terminal 10 is fixed to the wall 216. As especially mentioned above, when the core module assembly 12 is fixed to the pivot rotation basic assembly 18, The install stand 58, the covering 62, the attachment implement 116, and the core module assembly 12 define the protective case of the retail terminal 10 as a whole. The data cable (for example, LAN cable 96) portion and power cable (for example, power cable 54) portion which are prolonged besides the opening 564 of the wall 216 and the opening 236 for cable operation of the attachment plate 218 are thoroughly wrapped in the inside of the protection case of the basic assembly 18. Such a special feature is the method that an electrical cable may be removed from each connector, when the retail terminal 10 is fixed to the wall 216, It is pulled by the user (namely, a customer or a store employee), or if another word is carried out, it is desirable at the point of preventing being contacted.

[0090]As shown in Drawing 28th [ the ] and 29, the core module assembly 12 may be fixed to not the pivot rotation basic assembly 18 but one-way nature thru/or the angle fixed-foundations assembly 246. The place which is called "It being a tropism basic assembly on the other hand" thru/or "angle fixed-foundations assembly" here and which carries out a definition, When the core module assembly 12 is fixed to a basic assembly, it is a basic assembly constituted so that the core module assembly 12 may be maintained by a fixed position thru/or the angle. In particular, unlike the pivot rotation basic assembly 18, the angle fixed-foundations assembly 246 does not include the leaning device for promoting pivot rotational movement of the core module assembly 12.

[0091]Therefore, at the time of the operation, the core module assembly 12 will be held in stillness, If fixed to the angle fixed-foundations assembly 246. Such composition has it, especially when the retail assembly 10 operates as an un-caring-for nature retail terminal. [ useful ] By maintaining the core module assembly 12 to a fixed position especially, If the core module assembly 12 is operated by the user (that is, he is a customer in the case of an un-caring-for nature retail terminal) or carries out another word, The number of the opportunities contacted will decrease and, probably service life of the retail terminal will be \*\*\*\*\* (ed) by it.

[0092]The angle fixed-foundations assembly 246 contains the case 272 provided with the side panels 264 and 266, the hinge member 268, and the electric power supply machine 270 of a couple. The power source 270 is electrically combined with the power connector 26 of the main controller board 22 via the middle power cable 556 like the electric power supply machine 50 of the pivot rotation basic assembly 18 (refer to the 6th figure). The power cable 558 (refer to the 6th figure) combines the electric power supply machine 270 with the 110 VAC output 512 electrically, and supplies electric power to the retail terminal 10 by it.

[0093]The electric power supply machine 270 is stored in the case 272 of the angle fixed-foundations assembly 246. Especially the electric power supply machine 270 is fixed to the basic attachment structure 274 (refer to the 35th figure) of the angle fixed-foundations assembly 246, i.e., a plate. He has to understand that such composition strengthens cable duct Osamu attached to the retail terminal 10. Especially the case 272 provides some openings 276 for cable operation in the inside (refer to the 35th figure). It is made to combine with the standard 110 VAC output 512, and the 1st end of the power cable 558 may advance the 2nd end of the power cable 558 to

any one of the openings 276 for operation, and may combine it with the electric power supply machine 270 after that.

[0094]By constituting still in this way, the middle power cable 556, It has covered by the core module assembly 12 (when the core module assembly 12 is fixed to the case 272). It becomes possible from the electric power supply machine 270 to advance to the power connector 26 (refer to 4th [ the ] and 6 figure), and if some middle power cables 556 hang down from the retail terminal 10 or it carries out another word by it, it will prevent hanging. By constituting the angle fixed-foundations assembly 246 in this way, The cable of others attached to the retail terminal 10, for example, a LAN cable and a speaker cable, is advanced through the opening 276 for operation, He has to understand that it becomes possible to make it join together, without making it hang, if it hangs down to the electrical connector 24, 28, 30, 32, 34, 36, 38, 412, or 414 corresponding after that from the retail terminal 10 or another word is carried out to it.

[0095]By using the electric power supply machine 270, removal of the core module assembly 12 from the pivot rotation basic assembly 18, He has to understand that wearing to the angle fixed-foundations assembly 246 of the subsequent core module assembly 12 comes to be performed quickly [ the order of a foul trick ], and simply again. By forming a separate electric power supply machine in each basic assembly (namely, the pivot rotation basic assembly 18 and the angle fixed-foundations assembly 246) especially, Without moving an electric power supply machine for the core module assembly 12 among the basic assemblies 18 and 246, can make it move and between the basic assemblies 18 and 246 to eye others. The quantity of the time taken to move the core module assembly 12 among the basic assemblies 18 and 246 and time and effort can be reduced. For example, it fixes to the pivot rotation basic assembly 18 first, and may be made for the core module assembly 12 to achieve a care nature selling function like a POS function by it. Although electric power is supplied to the core module assembly 12 with the electric power supply machine 50 at this time, the feeder 50 is combined with the power connector 26 of the main controller board 22 via the middle power cable 52.

[0096]Then, the middle power cable 52 is removed from the power connector 26, and the core module assembly 12 is removed from the pivot rotation basic assembly 18, and it may be made to attach to the angle fixed-foundations assembly 246 by it. If it attaches to the angle fixed-foundations assembly 246 mechanically in the way once mentioned later, electric power, The core module assembly 12 is supplied with the electric power supply machine 270 combined with the power connector 26 of the main controller board 22 via the middle power cable 556. Once it is electrically combined with the electric power supply machine 270, the core module assembly 12 can be used for performing an un-caring-for nature selling function like a goods demonstration selling function.

[0097]Since the core module 12 is fixed to the case 272 of the angle fixed-foundations assembly 246, the hinge member 268 is formed. Especially the hinge member 268 provides the flange 278 for maintenance of a couple in the inside. This flange 278 cooperates with the slot 280 (refer to the 29th figure) for maintenance of the couple provided in the summit plate of the case 272, and enables the hinge member 268 to move in the direction of either the arrow 284 of Drawing 28, or the arrow 286 as a whole by it.

[0098]This hinge member 268 provides the puncturing 288 of a couple in that inside further. Since the core module assembly 12 is fixed to the hinge member 268, this puncturing 288 is formed. Although especially the back cover 46 of the core module assembly 12 provides the puncturing 290 of a couple in the inside, the puncturing 290 is equal to the puncturing 292 and the same axle of a couple which are provided in the fixing face 454 of the heat-conduction case 430, when a back cover is attached to the heat-conduction case 430 (refer to the 4th figure). In order to fix the back cover 46 to the back enclosure 44, he has to understand that the bolt 464 of a couple is positioned by the puncturing 290 and 292. The core module assembly 12 is fixed to the hinge member 268 using the same bolt 464.

[0099]Especially, advance braces through the puncturing 288 from the rear face of the hinge member 268, fit them into the puncturing 290 and 292 provided in the back cover 46 and the heat-conduction case 430 via a thread groove after that, respectively, and by it. (1) Fix the core module assembly 12 to the basic assembly 246 according to the hinge member 268, and fix the summit of the (2) back cover 46 to the case 430. When the back enclosure 44 is fixed to the hinge member 268 in this way, the core module assembly 12, It becomes possible to the case

272 of the angle fixed-foundations assembly 246 to carry out axial rotation as a whole in the direction of either the arrow 284 of Drawing 28, or the arrow 286. By such axial rotation of the core module assembly 12, approach on some parts like the electric power supply machine 270 or the scanner device 80 accommodated in the inside of a case becomes easy.

[0100]The side panels 264 and 266 provide the tab 296 for attachment in the inside, respectively. This tab 296 for attachment and hinge member 268 cooperate, and define the attachment structure of the angle fixed-foundations assembly 246 by it. The fundus of the core module assembly 12 is fixed to the case 272 of the angle fixed-foundations assembly 246 using the tab 296 for attachment. Axial rotation is carried out in the direction of the arrow 286 of Drawing 28 as a whole, and especially the core module assembly 12 is positioned so that the side attachment wall 438 (refer to the 4th figure) may project and the portion 252 may appear in the tab 296 for attachment to the case 272 by it. Then, a bolt or braces like a screw (not shown) are advanced through the puncturing 298 in which it is provided by the side panel 266, and it is made to fit in after that via the puncturing 300 with a thread groove and the thread groove which are provided in the flange 302 contained in the hinge member 268 (refer to the 29th figure). If braces are positioned by the puncturing 298 and 300 and locked or carry out another word of the core module assembly 12 to the angle fixed assembly 246 by it according to the case 272, When it fixes, the hinge member 268 must understand that the relative axis rotation to the case 272 is prevented.

[0101]As shown in the 30th to 33 figure, the retail terminal 10 is provided with some different gestalten, and fills the demand for performing a desired selling function by it. For example, the retail terminal 10 is good also as composition provided with the scanner device 80 (refer to the 30th and 32 figure). When the retail terminal 10 is used as a POS terminal, the scanner device 80 is useful especially although merchandise information is inputted. In particular, if another word of the merchandise specifying code contained in the bar code attached to each purchase item in a scanner device is scanned or carried out when a customer thru/or a salesclerk use this retail terminal 10 for check-out of purchase items, it can use for catching. Once it gains a merchandise specifying code, the retail terminal 10, A store network system (namely, LAN94) and wireless connection (namely, LAN card 66), Or it may communicate via either of the connection combination (namely, LAN cable 96 combined with the LAN connector 24), and the price information which is attached to the purchase item by it may be gained.

[0102]The scanner device 80 is useful also when the retail terminal 10 is used as a merchandise information terminal. For example, establish the retail terminal 10 in the territory of a retail trade store, and by it. A customer scans the bar code attached to a certain item with the scanner device 80, enables it to acquire merchandise information like a price or the mold feature by it, and may be made to care for a customer's commodity selection by it.

[0103]As an exception method, the retail terminal 10 may be constituted so that the scanner device 80 (refer to Drawing 31 and the 33rd figure) may not be used. Such composition has it, when the retail terminal 10 is used in that of composition of lowering the cost which does not need the input of a merchandise specifying code, therefore accompanies the retail terminal 10. [desirable] For example, the retail terminal 10 is a case where it is used for displaying an audio-visual (A/V) goods demonstration.

[0104]Furthermore, the retail terminal 10 may be made the composition which does not use the stereo speaker assembly 16 (refer to 32nd [ the ] and 33 figure). Such composition has it, when the retail terminal 10 is used in the composition which does not need stereophonic reproduction. [desirable] For example, the retail terminal 10 is a case where it is used for displaying the video goods demonstration which does not contain stereo sound.

[0105]Finally, the retail terminal 10 may be made the composition which uses the scanner device 80 and neither of the stereo speaker assembly 16 (refer to the 33rd figure). Such composition has it, when the retail terminal 10 is used in a merchandise specifying code input and the composition which does not need stereophonic reproduction. [desirable]

[0106]When Drawing 35 is referred to from Drawing 34, the angle fixed-foundations assembly 246, The core module assembly 12 may be used although [ like a substantially level field like / on / 214 (refer to the 34th figure) / a desk / or the wall 216 thru/or the pillar 304 (refer to the 36-37th figure) / which is substantially fixed to either of the vertical fields ]. Especially the retail terminal 10 may be fixed to desk 214 with the attachment plate 218. Especially the base plate 274 of the

basic assembly 246 provides some slots 306 for attachment in the inside. One of the bolts 408 is advanced through each puncturing 226 for immobilization in which it is provided by the attachment plate 218, it fits into the corresponding fixed puncturing 402 provided in desk 214 via a thread groove after that, and the attachment plate 218 is fixed to desk 214 by it.

[0107]Then, it cooperates with the slot 306 for attachment, and by it, the tab 220 for attachment attaches the base plate 274 of the basic assembly 246, and fixes to the plate 218. especially, advance the basic assembly 246 (the core module assembly 12 fixed to the assembly is included) in the direction of the arrow 308 of Drawing 35 as a whole, and the tab 220 for attachment attaches it by it -- business -- it is made equal to the slot 306 and the same axle Then, the basic assembly 246 is advanced in the direction of the arrow 308 further as a whole, and the tab 220 for attachment is accepted by it in the slot 306 for attachment. Once the tab 220 for attachment is accepted inside the slot 306 for attachment, the basic assembly 246, If it is energized in the direction of the arrow 310 of Drawing 35 or another word is carried out to it as a whole, slide \*\*\*\* is carried out, the tab 220 for attachment is carried forward to the lock part 312 of the slot 224 for attachment by it, and the tab is locked by it in the inside.

[0108]As mentioned above, the attachment plate 218 provides the flange 244 for a lock in the inside further. As shown in Drawing 35, the plate lock puncturing 234 is provided in this flange 244 for a lock. A bolt thru/or braces like the screw 254 are advanced through the plate lock puncturing 234, Then, it is advanced to the corresponding base lock puncturing 314 provided in the back attachment structure 316, i.e., the plate of the case 272, and by it. If the basic assembly 18 glides suddenly or carries out another word, it will move, and it will prevent so that the tab 220 for attachment may not separate from the slot 306 for attachment unexpectedly by it.

[0109]The electrical cable (for example, the power cable 558 thru/or LAN cable 96) of a large number attached to the retail terminal 10 may be carried forward to the opening 562 in which it is provided by desk 214 through the opening 236 for cable operation of through and the after that attachment plate 218. Once an electrical cable is accepted through the opening 236 for cable operation provided in the attachment plate 218, It advances through one of the openings 276 for cable operation attached to the basic assembly 18, Then, it may be made to combine with one of the electrical connectors 24, 26, 28, 30, 32, 34, 36, 38, 412, and 414 (refer to the 4th figure) attached to the core module assembly 12. For example, LAN cable 96 may be carried forward through one of the opening 562 provided in desk 214, the opening 236 for cable operation provided in the attachment plate 218, and the openings 276 for cable operation provided in the basic assembly 246.

[0110]Once it is accepted through the opening 276 for cable operation, it will be connected to the LAN connector 24 and the data connector 578 of LAN cable 96 will combine the core module assembly 12 with LAN94 electrically by it. The power cable 558 contains the power connector 582, as shown in Drawing 35. The power cable 558 may be advanced through one of the opening 562 provided in desk 214, the opening 236 for cable operation provided in the attachment plate 218, and the openings 276 for cable operation provided in the basic assembly 246. Once it is accepted through the opening 276 for cable operation, it will be connected to the electric power input connector 574 of the electric power supply machine 270 (refer to the 28th and 29 figure), and the power connector 580 will combine the electric power supply machine 270 with the 110VAC power supply 512 electrically by it. The middle power cable 556 Then, the power connector 26 of the core module assembly 12, It connects with both electric power output connectors 576 (refer to 28th [ the ] and 29 figure) of the electric power supply machine 270, and the core module assembly 12 is electrically combined with the electric power supply machine 270 by it.

[0111]Such composition must understand strengthening cable duct Osamu attached to the terminal 10, when the retail terminal 10 is fixed to desk 246. When the core module assembly 12 is especially fixed to the angle fixed-foundations assembly 246, the case 272 of the angle fixed-foundations assembly 246 and the core module assembly 12 define the protective case of the retail terminal 10 as a whole. . Extend besides the opening 562 of desk 214, and the opening 236 for cable operation of the attachment plate 218. A data cable (for example, LAN cable 96) portion and a power cable (for example, power cable 558) portion are thoroughly wrapped in the inside of the protection case of the basic assembly 246. Such a special feature is the method that an electrical cable may be removed from each connector, when the retail terminal 10 is fixed to desk

214, It is pulled by the user (namely, a customer or a store employee), or if another word is carried out, it is desirable at the point of preventing being contacted.

[0112]As shown in the 36th and 37 figure, the retail terminal 10 may be fixed to the pillar 304 with the attachment plate 238. The attachment plate 238 resembles the attachment plate 218 a little. Therefore, in nominating common parts as what was mentioned above about Drawing 35 from Drawing 1, the same reference number will be used in Drawing 36th [ the ] and 37. The attachment plate 238 has U mold structure member 318 of the couple prolonged in the method of the outside fixed to the plate. As shown in Drawing 37, this structural member 318 cooperates mutually and defines the central cavity 320.

[0113]This structural member 318 provides some extended slots 322 in that inside. Since the attachment plate 238 is fixed to the pillar 304, this extended slot 322 is established. In particular, some metal bands [ like ] which are band-like clamps may be carried forward to the circumference of a pillar, and it may advance through the extended slot 322 after that. Once it advances through an extended slot, the opposite end of this band-like clamp 406 is fixed mutually, and the attachment plate 238 is fixed to the pillar 304 by it. The usable band-like clamp of one type is a hose clamp of the stainless steel known widely, and has length sufficient in a way which was mentioned above to advance to the circumference of a pillar.

[0114]Once the attachment plate 238 is fixed to the pillar 304, the case 272 of the basic assembly 246 may be fixed to the plate. Especially the rear plate 316 of the case 272 provides some slots 326 for attachment in the inside. The tab 220 for attachment of the attachment plate 238 cooperates with the slot 326 for attachment, and fixes the rear plate 316 of the basic assembly 246 to the pillar 304 by it according to the attachment plate 238. Especially the basic assembly 246 (the core module assembly 12 fixed to the assembly is included), As a whole, it advances in the direction of the arrow 328 of Drawing 37 toward the attachment plate 238 (fixed to the pillar 304), and is made equal [ the tab 220 for attachment ] to the slot 326 for attachment, and the same axle by it.

[0115]Then, the basic assembly 246 is advanced in the direction of the arrow 328 further as a whole, and the tab 220 for attachment is accepted inside the slot 326 for attachment by it. Once the tab 220 for attachment is accepted by the slot 326 for attachment, the basic assembly 246, If it is energized in the direction of the arrow 330 of Drawing 37 or another word is carried out to it as a whole, slide \*\*\*\* will be carried out and by it the tab 220 for attachment, It is advanced to the lock part 332 of the slot 326 for attachment, and each attachment slot locks the tab 220 for attachment in the inside by it.

[0116]The attachment plate 238 provides the flange 334 for a lock in the inside further. The plate lock puncturing 336 is provided in the inside of this flange 334 for a lock. A bolt thru/or braces like the screw 570 are advanced through the puncturing 336 for a lock, are advanced after that to the corresponding inside of the puncturing 338 for a base lock provided in the base plate 274, and by it. If the basic assembly 346 glides or carries out another word to unexpected, it will move, and it will prevent so that the tab 220 for attachment may not separate from the slot 326 for attachment unexpectedly by it.

[0117]The attachment plate 238 provides the cable operation opening 340 in the inside. The electrical cable (for example, the power cable 558 thru/or LAN cable 96) of a large number attached to the retail terminal 10 may be carried forward to the opening 566 in which it is provided by the pillar 304 through the opening 340 for cable operation of through and the after that attachment plate 238. Once an electrical cable is accepted through the opening 340 for cable operation provided in the attachment plate 238, It advances through one of the openings 276 for cable operation attached to the basic assembly 246, Then, it may be made to combine with one of the electrical connectors 24, 26, 28, 30, 32, 34, 36, 38, 412, and 414 (refer to the 4th figure) attached to the core module assembly 12. For example, LAN cable 96 may be carried forward through one of the opening 566 provided in the pillar 304, the opening 340 for cable operation provided in the attachment plate 238, and the openings 276 for cable operation provided in the basic assembly 246. Once the data connector 578 of LAN cable 96 is accepted through the opening 276 for cable operation, it will be connected to the LAN connector 24 and it will combine the core module assembly 12 with LAN94 electrically by it.

[0118]The power cable 558 may be advanced again through one of the opening 566 provided in the pillar 238, the cable operation opening 340 provided in the attachment plate 238, and the

openings 276 for cable operation provided in the basic assembly 246. Once it is accepted through the opening 276 for cable operation, the power connector 582 of the power cable 558, It is connected to the electric power input connector 574 of the electric power supply machine 270 (refer to the 28th and 29 figure), and the electric power supply machine 270 is electrically combined with the 110 VAC power supply 512 by it. The middle power cable 556 Then, the power connector 26 of the core module assembly 12, It connects with both electric power output connectors 576 (refer to 28th [ the ] and 29 figure) of the electric power supply machine 270, and the core module assembly 12 is electrically combined with the electric power supply machine 270 by it.

[0119]Such composition must understand strengthening cable duct Osamu attached to the retail terminal 10, when the terminal 10 is fixed to the pillar 304. As especially mentioned above, when the core module assembly 12 is fixed to the angle fixed-foundations assembly 246, the case 272 of the angle fixed-foundations assembly 246 and the core module assembly 12 define the protective case of the retail terminal 10 as a whole. The data cable (for example, LAN cable 96) portion and power cable (for example, power cable 558) portion which are prolonged besides the opening 566 of the pillar 304 and the opening 340 for cable operation of the attachment plate 238 are thoroughly wrapped in the inside of the protection case of the basic assembly 246. Such a special feature is the method that an electrical cable may be removed from each connector, when the retail terminal 10 is fixed to the pillar 304, It is pulled by the user (namely, a customer or a store employee), or if another word is carried out, it is desirable at the point of preventing being contacted.

[0120]The attachment plate 238 may be further used for fixing the core module assembly 12 to a flat vertical wall (refer to the 26th figure). A bolt thru/or braces like a screw (not shown) are advanced through each wall attachment slot 342, and it fits into the corresponding puncturing 404 for immobilization provided in the wall 216 via a thread groove after that (Drawing 27), and attaches by it, and the plate 238 is fixed to the wall 216. Once the attachment plate 238 is fixed to the wall 216, the core module assembly 12 may be attached in the way mentioned above, and it may fix to the plate 238.

[0121]As shown in Drawing 38 and Drawing 39, the core module assembly 12 may be combined with the wall 216 according to the direct taking price plate 218 using the attached plate 344. The attached plate 344 is fixed to the core module assembly 12 like the attachment implement 116 of the pivot rotation basic assembly 18. Especially the attached plate 344 provides the flanges 346 and 348 of a couple in the inside. The flange 348 contains the comparatively flat portion 350 and the key portion 352. The extended slot 354 is provided in the inside of each flange 346, and, on the other hand, the puncturing 356 is provided in the flat part 350 of each flange 348. In order to fix the core module assembly 12 to the attached plate 344, To the attached plate 344, the side attachment wall 438 projects the core module assembly 12, and it is positioned so that the portion 252 (refer to the 4th figure) may appear in the key portion 352 of the flange 348 provided in the attached plate 344.

[0122]Then, braces (not shown) like a bolt of the 1st couple are made to fit into the puncturing 126 with a thread groove in which the extended slot 354 is provided by the back enclosure 44 of the core module assembly 12 through and after that (refer to the 4th figure). Advance braces (not shown) like a bolt of the 2nd couple through the puncturing 356, make them fit into the puncturing 248 and 250 provided in the back cover 46 and the fixing face 450, respectively via a thread groove after that, and by it. The core module assembly 12 is fixed to the attached plate 344.

[0123]The attachment plate 218 is fixed to the wall 216 in the way mentioned above in relation to Drawing 26th [ the ] and 27. In particular, let pass and advance the bolt 408 to each puncturing 226 for immobilization in which it is provided by the attachment plate 218, it is made to fit into the corresponding puncturing 404 for immobilization provided in the wall 216 via a thread groove after that, and the attachment plate 218 is fixed to the wall 216 by it.

[0124]Then, the tab 220 for attachment provided in the attachment plate 218, It cooperates with a corresponding number of attachment slots 358 provided in the attachment structure 388 of the attached plate 344, and the attached plate 344 is fixed to the wall 216 by it according to the attachment plate 218. Especially the attached plate 344 (the core module assembly 12 fixed to the plate is included), as a whole, advance in the direction of the arrow 360 of Drawing 39 toward the attachment plate 218 (bolting is carried out to the wall 216), and the tab 220 for attachment of

the attached plate 344 attaches by it -- business -- it is made equal to the slot 358 and the same axle

[0125]Then, the attached plate 344 is carried forward in the direction of the arrow 360 further as a whole, and the tab 220 for attachment is accepted by it in the slot 358 for attachment. Once the tab 220 for attachment is accepted inside the slot 358 for attachment, the attached plate 344, If it is energized in the direction of the arrow 362 or another word is carried out to it as a whole, slide \*\*\*\* is carried out, the tab 220 for attachment is carried forward to the locked position 364 of each slot 358 for attachment by it, and the slot locks the tab 220 for attachment in the inside by it.

[0126]Then, a bolt thru/or braces like a screw (not shown) are advanced through the puncturing 234 for a plate lock, are advanced after that to the corresponding inside of the puncturing 366 provided in the attached plate 344, and by it. If the attached plate 344 glides or carries out another word to unexpected, it will move, and it will prevent so that the tab 220 for attachment may not separate from the slot 358 for attachment unexpectedly by it.

[0127]The cable of a large number attached to the retail terminal 10 may be advanced to the opening (not shown) in which it is provided by the wall 216 through the opening 236 for cable operation of through and the after that attachment plate 218. Once a cable is accepted through the opening 236 for cable operation, It advances through one of some openings 368 for cable operation provided in the attached plate 344, Then, it may be made to combine with one of the electrical connectors 24, 26, 28, 30, 32, 34, 36, 38, 412, and 414 (refer to the 4th figure) attached to the core module assembly 12. Such composition must understand strengthening cable duct Osamu attached to the retail terminal 10, when the terminal 10 is fixed to the wall 216. For example, when it attaches to the wall 216 using the attached plate 344, the electric power supply of the core module assembly 12 must be performed using a utility power feeder like a "brick type" electric power supply machine. Therefore, the power cable (not shown) which combines a utility power feeder with the power connector 26 (refer to Drawing 4 and the 6th figure) may be carried forward in the way mentioned above.

[0128]

[Effect of the Invention]It may use for performing the selling function of the kind from which some differ the retail terminal 10 at the time of operation. For example, the retail terminal 10 may be first operated as an un-caring-for nature sales terminal which performs a goods demonstration selling function. The angle fixed-foundations assembly 246 may be made to fix to the wall 216 or a vertical attachment side like the pillar 304 in the above-mentioned way especially. Next, the core module assembly 12 is mechanically fixed to this angle fixed-foundations assembly 246. Electric power is supplied from the electric power supply machine 270 to this core module assembly 12.

[0129]That is, the feeder is combined with the electrical connector 26 of the core module assembly 12 via the middle power cable 52. If it is once mechanically combined with the angle fixed-foundations assembly 246 and is electrically combined with the electric power supply machine 270 after that, the core module assembly 12 can perform a goods demonstration selling function. Such a function includes reproducing a video image and a corresponding audio message in the display monitor 20 and the stereo speaker assembly 16, respectively. Generally this video and an audio message relate to the various goods sold by the storekeeper. For example, a goods demonstration selling function includes copying goods commercials in the display monitor 20 and the stereo speaker assembly 16.

[0130]. [ whether in such a goods demonstration function, a customer touches the specific zone of a touch screen in relation to the display monitor 20, and ] Or it makes it possible to input a demand and other requests by touching the key which is attached to the keyboard 78 (supposing the retail terminal dealt with here is provided with the keyboard), or performing the either. Then, it may be made for the retail terminal 10 to display the information relevant to the customer's demand by the display monitor 20 and/or the stereo speaker assembly 16.

[0131]The retail terminal 10 is switched, demonstration of a merchandise information selling function is stopped, and it enables it to perform a POS selling function by it at a peak demand term. In particular, the angle fixed-foundations assembly 246 (the core module assembly 12 fixed to the assembly is included) may be removed from a vertical attachment side (for example, the wall 216 and the pillar 304), and may be fixed in the way mentioned above in a level attachment side like desk 214 after that. Once it fixes to desk 214, the retail terminal 10 may be used for

performing an un-caring-for nature POS selling function. Especially this retail terminal 10 may be operated as a self service checkout terminal.

[0132]At the time of self service checkout terminal operation, first, the customer itself scans a goods-purchased eye with the scanner device 80, and inputs it into the terminal 10. The core module assembly 12 communicates with LAN94 (passing either LAN card 66 or LAN cable 96), and obtains the price information relevant to each scanning item by it. Then, when a customer makes the inside of the card reading machine 14 either a debit card or a credit card passed through, Or the payment for the item is finished by putting cash on a cash acceptance machine (if the terminal 10 is provided with the cash acceptance machine).

[0133]He has to understand that the aforementioned argument means the illustration-on character target. Core module ASSAMBURI 12 and the angle fixed-foundations assembly 246 Namely, a vertical attachment side. Even when it fixes to (for example, the wall 216 and the pillar 304), he has to understand that it is possible to operate it so that some selling functions other than a goods demonstration selling function may be performed. For example, the retail terminal 10 is in the state which fixed the core module assembly 12 and the angle fixed-foundations assembly 246 to the vertical attachment side, and may perform a POS selling function and a personnel training selling function.

[0134]The pivot rotation basic assembly 18 (the core module assembly 12 fixed to the assembly is included) is the way mentioned above about the angle fixed-foundations assembly 246 again, Between a vertical attachment side (for example, the wall 216 and the pillar 304) and level attachment sides (for example, desk 214) may be moved. When the retail terminal 10 attaches the core module assembly 12 to the pivot rotation basic assembly 18, And on the other hand, when the pivot rotation basic assembly 18 is being fixed to either the vertical attachment side or the level attachment side, it can use for performing various care nature and an un-caring-for nature selling function.

[0135]For example, the retail terminal 10 may perform a care nature POS selling function, when the core module assembly 12 is fixed to the pivot rotation basic assembly 18 and the basic assembly 18 is being fixed to the level attachment side (for example, desk 214) next. In this composition, sales peripheral equipment, for example, a card reader, (For example, the card reader 14), a scanner device (for example, external portable scanner device), A cash drawer machine (for example, cash drawer machine 508) and the display for customers (for example, display monitor 510 for customers), It is electrically combined with the core module assembly 12, and may be made to support operation of the retail terminal 10 as a care nature POS terminal by it.

[0136]Instead of moving between a vertical attachment side and level attachment sides for the basic assemblies 18 and 246, he has to understand that what is necessary is just to move the same interval only for the core module assembly 12. For example, the angle fixed-foundations assembly 246 is fixed to a vertical attachment side (for example, the wall 216 and the pillar 304), and, on the other hand, the pivot rotation basic assembly 18 is fixed to a level attachment side (for example, desk 214). Between the basic assemblies 18 and 246 is moved for a core module assembly, and it may be made to perform various selling functions by it.

[0137]In particular, the core module assembly 12 is first attached to the angle fixed-foundations assembly 246 mechanically, and, on the other hand, the direction of the angle fixed-foundations assembly 246 is fixed to a vertical attachment side. Once it is mechanically attached to the angle fixed-foundations assembly 246, the core module assembly 12 will be electrically combined with the electric power supply machine 270 via the middle power cable 556 next. Next, this retail terminal 10 may be operated so that a selling function like a goods demonstration selling function may be performed.

[0138]If you would like to change the selling function performed by this retail terminal 10, connection release of the core module assembly 12 will be first carried out electrically from the electric power supply machine 270 by carrying out connection release of the middle power cable 556 from the power connector 26. Next, the core module assembly 12 is mechanically separated from the angle fixed-foundations assembly 246, and it joins to the pivot rotation basic assembly 18 mechanically after that. Once it is mechanically joined to the pivot rotation basic assembly 18, the core module assembly 12 will be electrically combined with the electric power supply machine 50 via the middle power cable 52. Next, the retail terminal 10 may be operated so that a selling

function like a care nature POS selling function may be performed.

## DESCRIPTION OF DRAWINGS

### [Brief Description of the Drawings]

[Drawing 1] Drawing 1 is a perspective view of the consumer interaction nature retail terminal which included the special feature of this invention in the inside. This retail terminal is cautious of being installed on a desk including a pivot rotation basic assembly.

[Drawing 2] Drawing 2 is a back perspective view of the attachment implement used since the retail terminal and retail terminal of Drawing 1 are fixed on a desk.

[Drawing 3] Drawing 3 is an exploded perspective view of the retail terminal of Drawing 1.

[Drawing 4] Drawing 4 is a back exploded perspective view of the core module assembly of the retail terminal of Drawing 1.

[Drawing 5] Drawing 5 is an exploded perspective view of the core module assembly of Drawing 4.

[Drawing 6] Drawing 6 is an outline block diagram of the retail terminal of Drawing 1.

[Drawing 7] Drawing 7 is a fundus elevational view of the mainboard assembly of the core module assembly of Drawing 4.

[Drawing 8] Drawing 8 is an expansion fragment perspective view of the mainboard assembly of Drawing 7.

[Drawing 9] Although Drawing 9 is the same expansion fragment perspective view as Drawing 7, it shows the back cover positioned in the non-displacement position.

[Drawing 10] Drawing 10 shows the mainboard assembly of Drawing 7 by which the back cover is positioned in the non-displacement position.

[Drawing 11] Although Drawing 11 is the same figure as Drawing 10, it shows the place where the back cover is positioned in the displacement position.

[Drawing 12] Drawing 12 is an expansion exploded perspective view of the mainboard assembly of Drawing 7, and the back cover is removed so that it may be visible clearly. It is cautious of a part of upper surface of a microprocessor being covered with thermally conductive grease so that it may be legible.

[Drawing 13] Although Drawing 13 is the same figure as Drawing 12, it shows the heat suction assembly fixed in the case of a mainboard assembly.

[Drawing 14] Drawing 14 is an expansion fragment perspective view of the mainboard assembly of Drawing 7, and shows the place where a bolt is accepted by the key part of a heat block through a key-like slot.

[Drawing 15] Drawing 15 is an expansion fragment elevational view of the mainboard assembly fundus of Drawing 7.

[Drawing 16] Drawing 16 is a perspective view of the pivot rotation basic assembly of the retail terminal of Drawing 1.

[Drawing 17] Drawing 17 is an exploded perspective view of the pivot rotation basic assembly of Drawing 16.

[Drawing 18] Although Drawing 18 is the same figure as Drawing 17, it shows the cage and ratchet member of a right direction attachment sub assembly further.

[Drawing 19] Drawing 19 is an expansion exploded perspective view of the right direction attachment assembly of Drawing 18.

[Drawing 20] Although (A) is Drawing 19 and the same figure, it shows a cage, a ratchet member, and an end cap still in detail. (B) is an elevational view when it sees in the direction of the arrow 20B of (A) \*\*, and shows the relation of an end cap and ratchet member of a right direction attachment assembly.

[Drawing 21] Although Drawing 21 is the same figure as Drawing 19, it shows the 2nd embodiment of a right direction attachment assembly.

[Drawing 22 A] Although (A) is Drawing 21 and the same figure, it shows an end cap still in detail. (B) is an elevational view when it sees in the direction of the arrow 22B of (A) of an end cap of the right direction attachment sub assembly of (A).

[Drawing 23] Drawing 23 is an expansion elevational view when the right direction attachment assembly (an imaginary line shows a lock member since it is legible) of Drawing 21 is seen in the

direction of the 22nd arrow 23 of (A).

[Drawing 24] Although Drawing 24 is the same figure as Drawing 23, it shows the place which has a lock member in a locked position.

[Drawing 25] Drawing 25 is an expansion perspective view of the base attachment plate of the pivot rotation basic assembly of Drawing 16 -- the assembly -- an axis -- the lever for a lock fixed pivotable is shown.

[Drawing 26] Drawing 26 is a fragment perspective view showing the retail terminal of Drawing 1 fixed to the wall.

[Drawing 27] Drawing 27 is a back perspective view of the retail terminal of Drawing 26, and shows the relation between the pivot rotation basic assembly of a retail terminal, and the attachment implement used since a retail terminal is fixed to a wall.

[Drawing 28] Drawing 28 is an exploded perspective view which was constituted so that an angle fixed-foundations assembly might be included instead of a pivot rotation basic assembly and in which showing the retail terminal of Drawing 1.

[Drawing 29] Although Drawing 29 is the same figure as Drawing 28, it shows the place which removed the hinge member from the case of the angle fixed assembly for conspicuousness.

[Drawing 30] Drawing 30 is a perspective view of the retail terminal of Drawing 28, and shows the retail terminal constituted so that both a stereo Spica and a scanner might be included.

[Drawing 31] Although Drawing 31 is the same figure as Drawing 30, it shows the retail terminal constituted so that a scanner might not be included.

[Drawing 32] Although Drawing 32 is the same figure as Drawing 30, it shows the retail terminal constituted so that a stereo speaker assembly might not be included.

[Drawing 33] Although Drawing 33 is the same figure as Drawing 30, it shows the retail terminal constituted so that neither a stereo speaker assembly nor a scanner might be included.

[Drawing 34] Drawing 34 is a perspective view of the retail terminal of Drawing 28, and shows the retail terminal fixed on the desk.

[Drawing 35] Drawing 35 is a back perspective view of the retail terminal of Drawing 34, and shows the relation between a retail terminal and the attachment implement used since a retail terminal is fixed on a desk.

[Drawing 36] Drawing 36 is a perspective view of the retail terminal of Drawing 28, and shows the retail terminal fixed to the pillar.

[Drawing 37] Drawing 37 is a back perspective view of the retail terminal of Drawing 36, and shows the relation between a retail terminal and the attachment implement used since it fixes centering on a retail terminal.

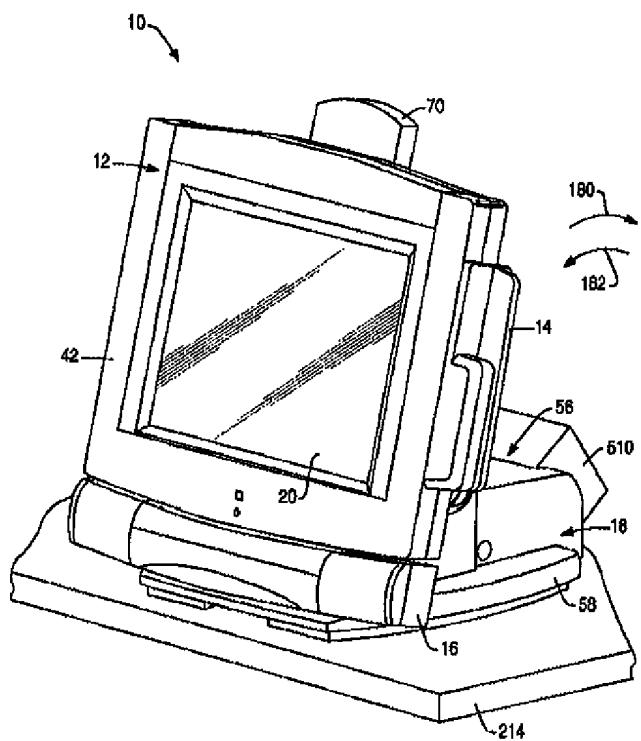
[Drawing 38] Drawing 38 is a side view of the retail terminal of Drawing 1 constituted so that an attached plate might be included instead of an angle fixed-foundations assembly or a pivot rotation basic assembly. A retail terminal is cautious of being fixed to a wall.

[Drawing 39] Drawing 39 is a back perspective view of the retail terminal of Drawing 38, and shows a relation with the attachment implement used since a retail terminal, an attached plate, and a retail terminal are fixed to a wall.

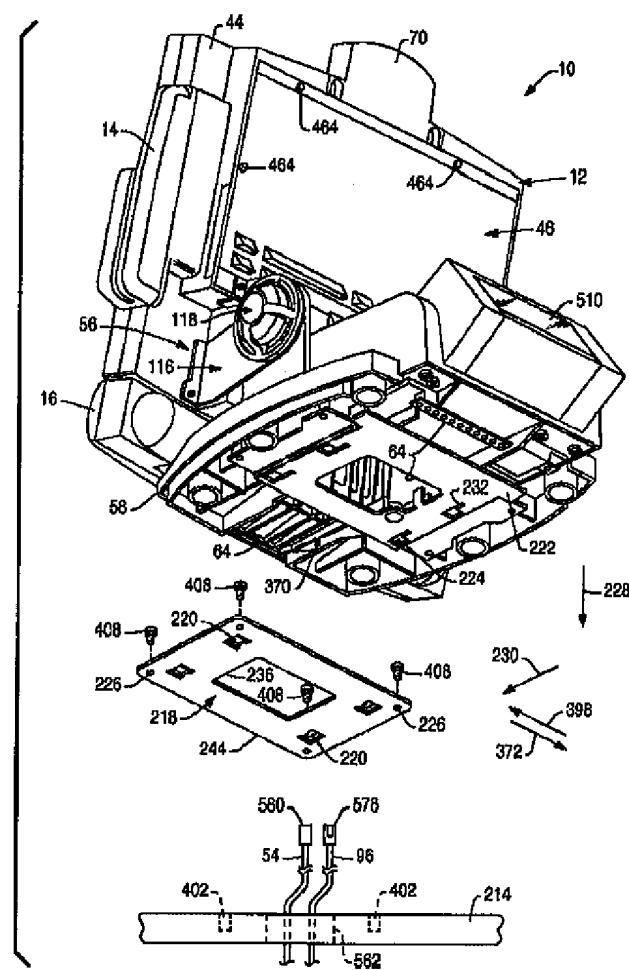
## DRAWINGS

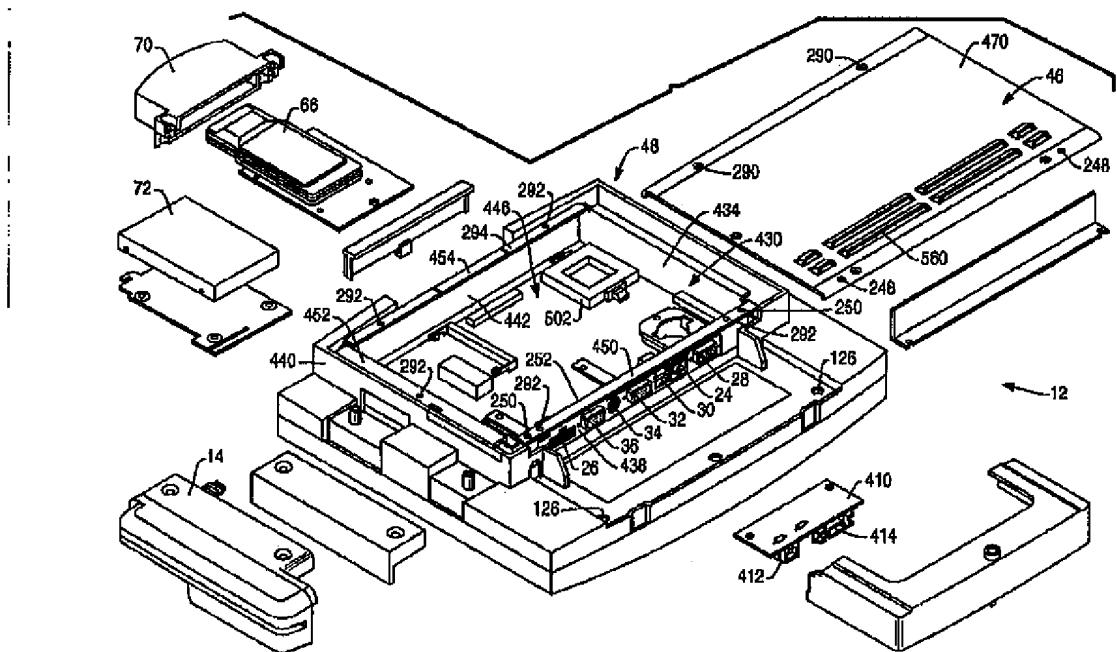
---

### Drawing 1

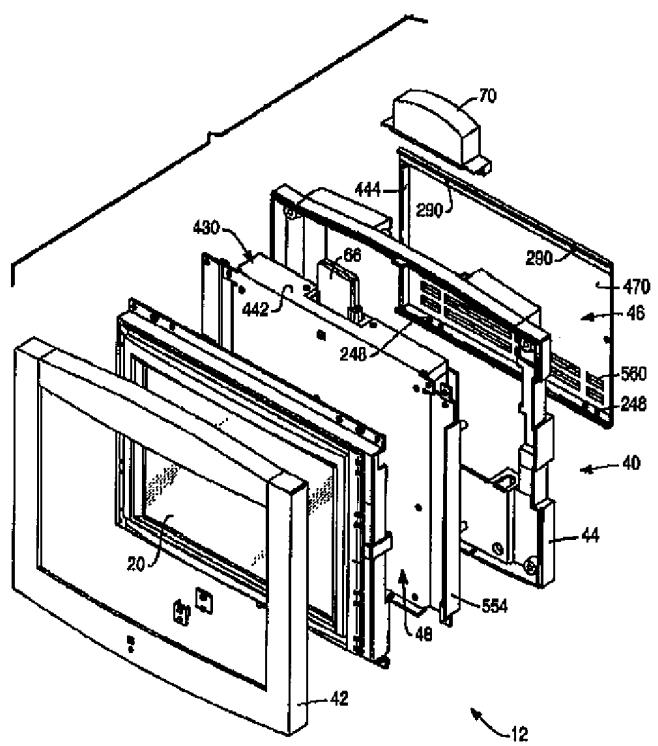


## Drawing 2

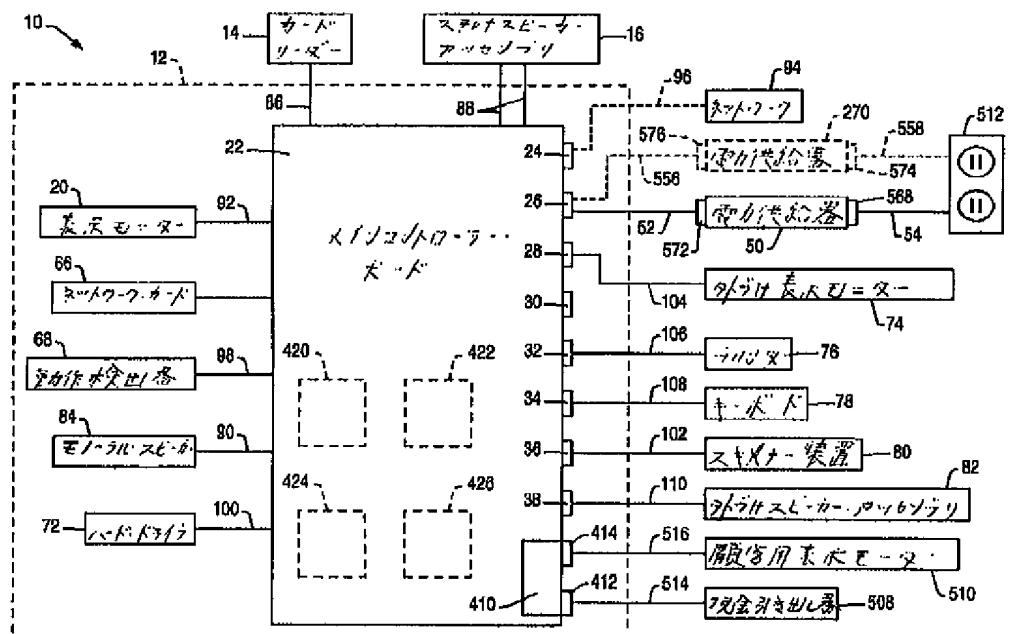




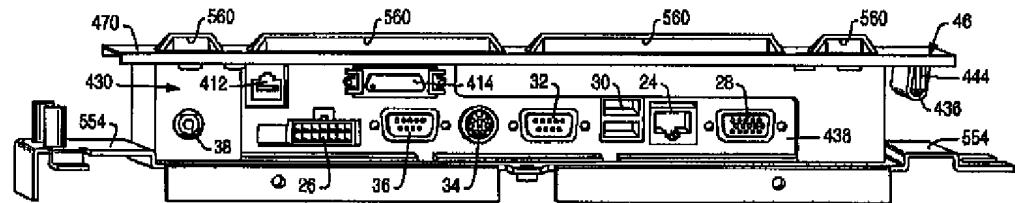
## Drawing 5



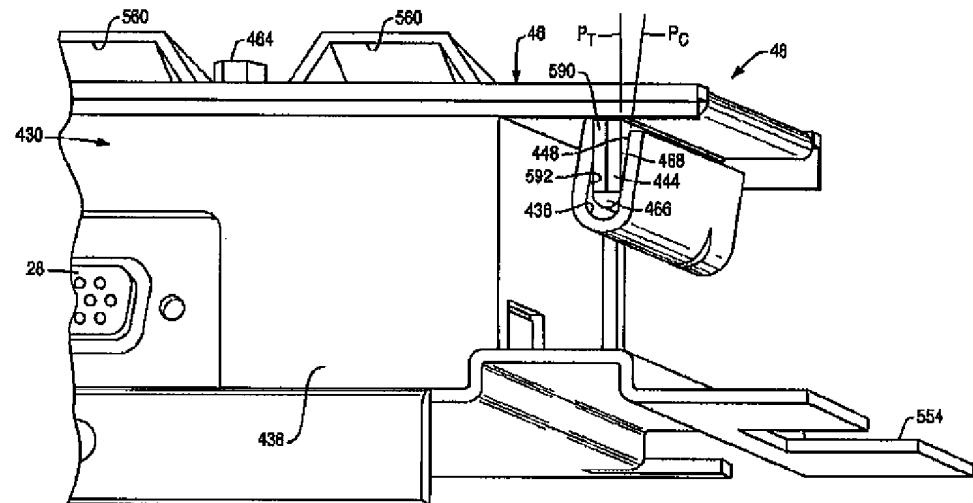
Drawing 6



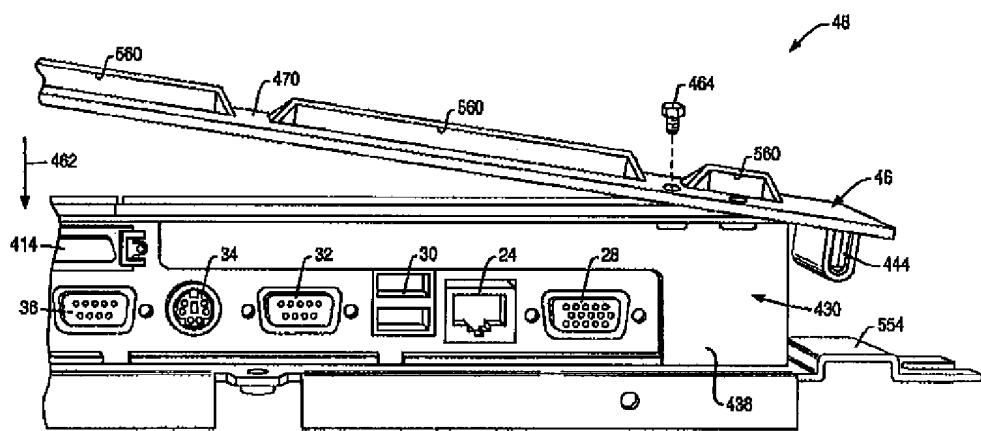
## Drawing 7



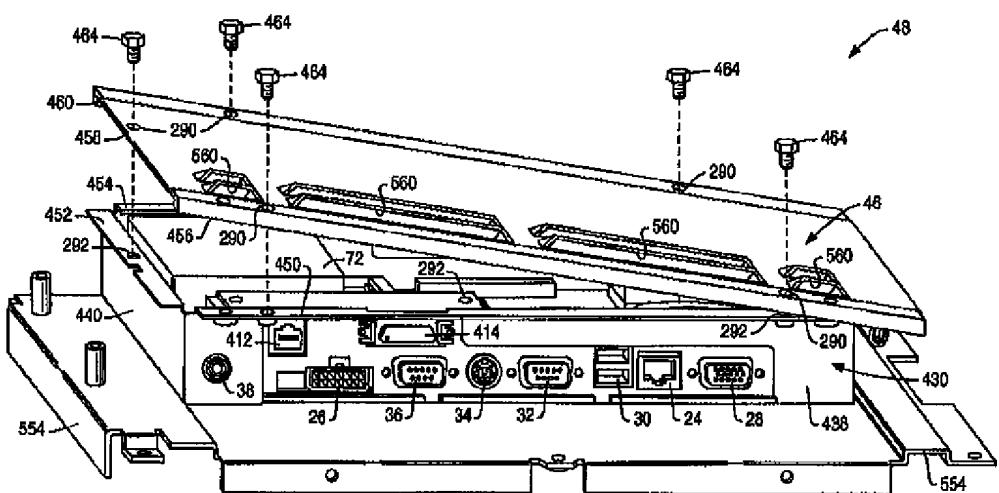
## Drawing 8



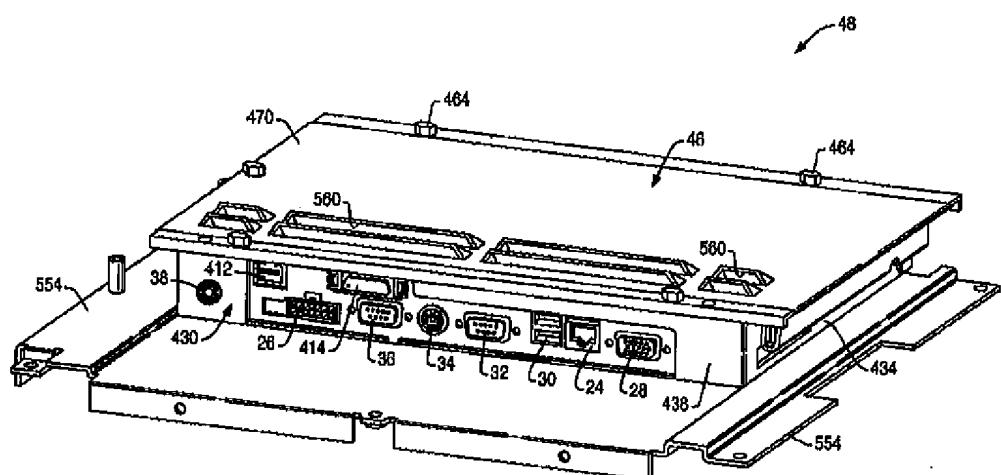
## Drawing 9



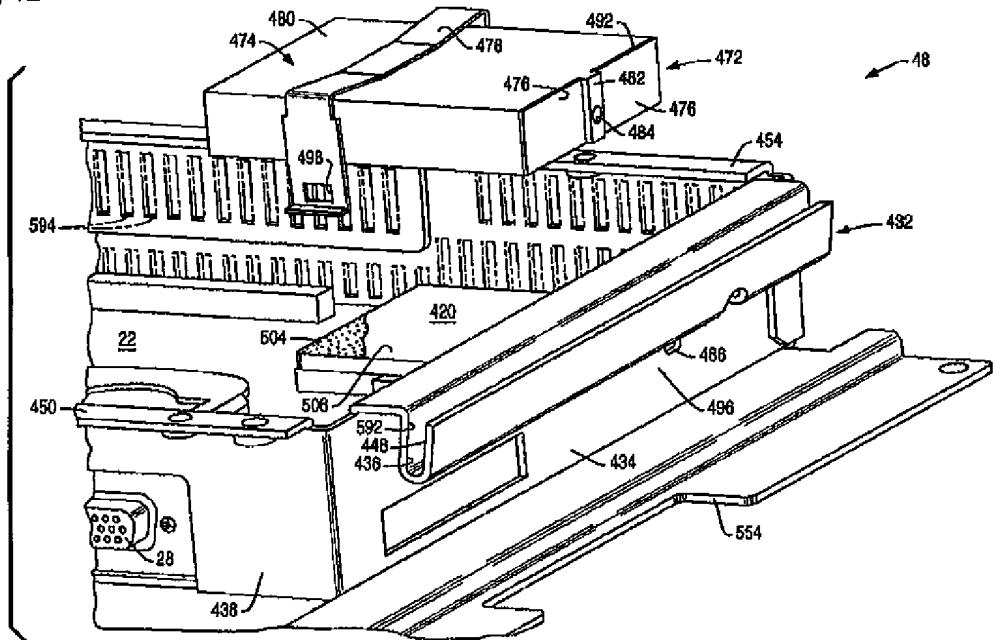
## Drawing 10



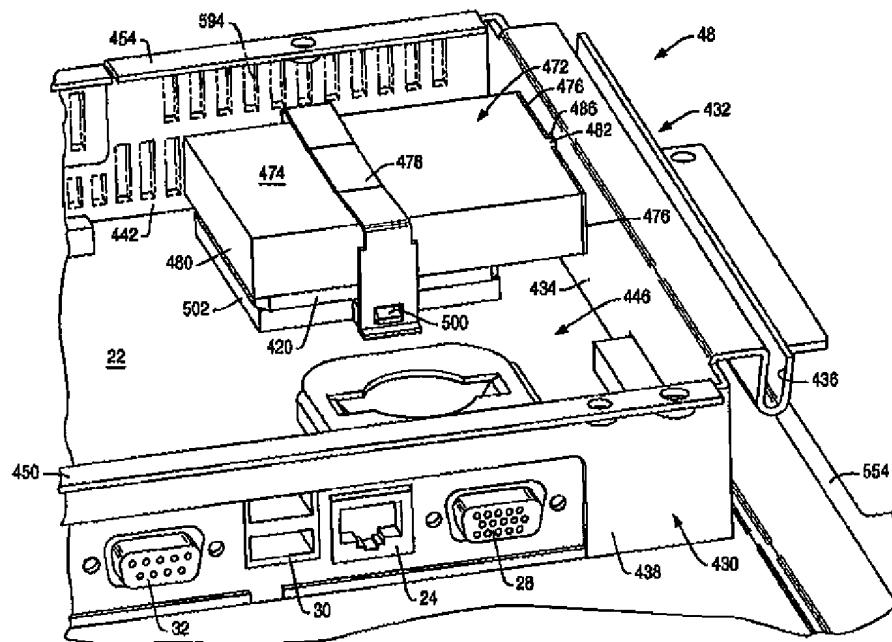
## Drawing 11



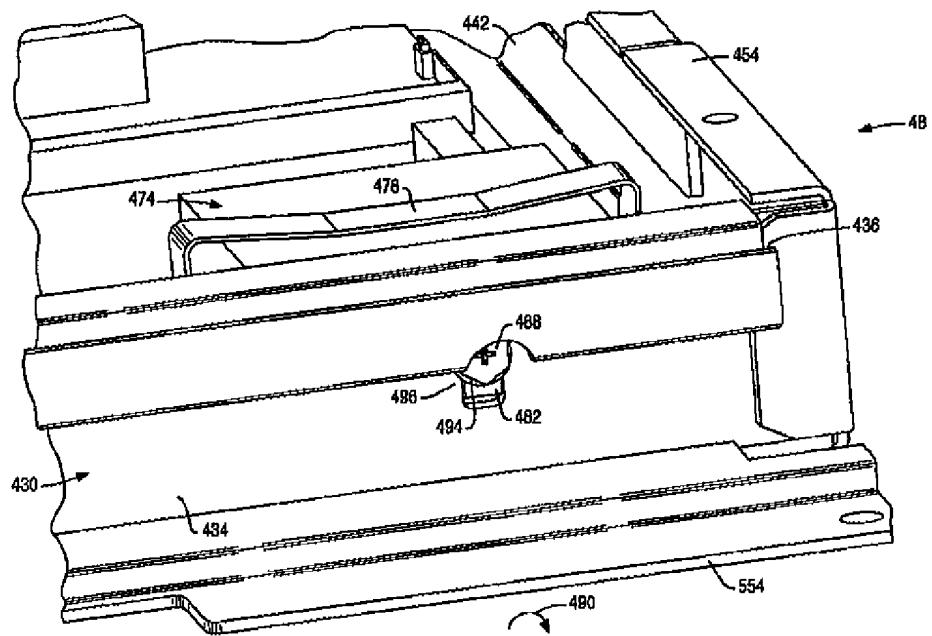
Drawing 12



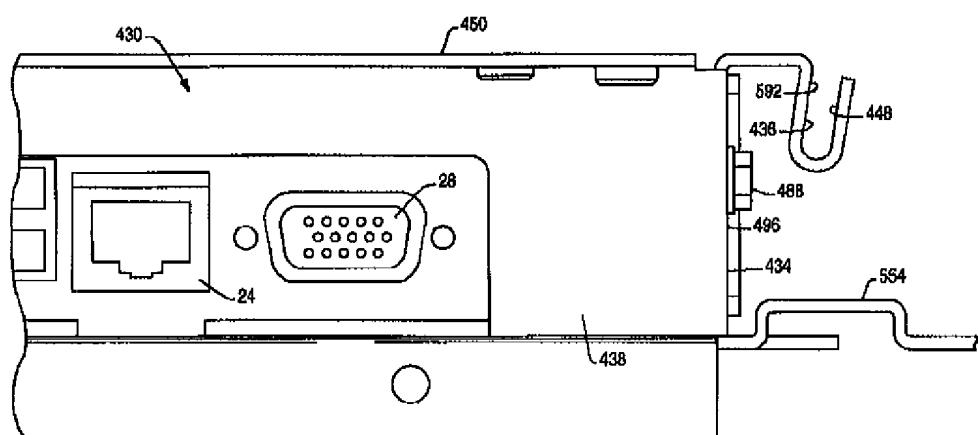
Drawing 13



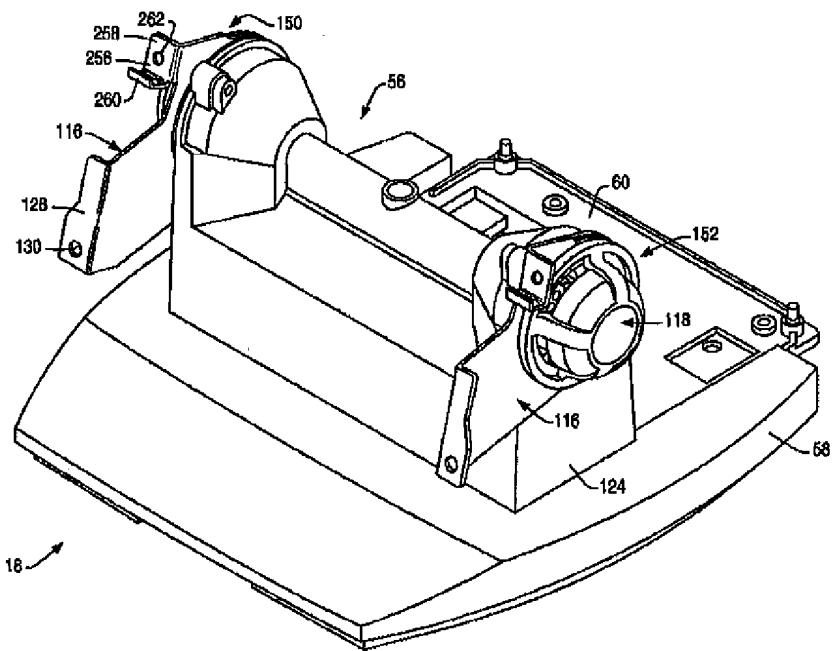
Drawing 14



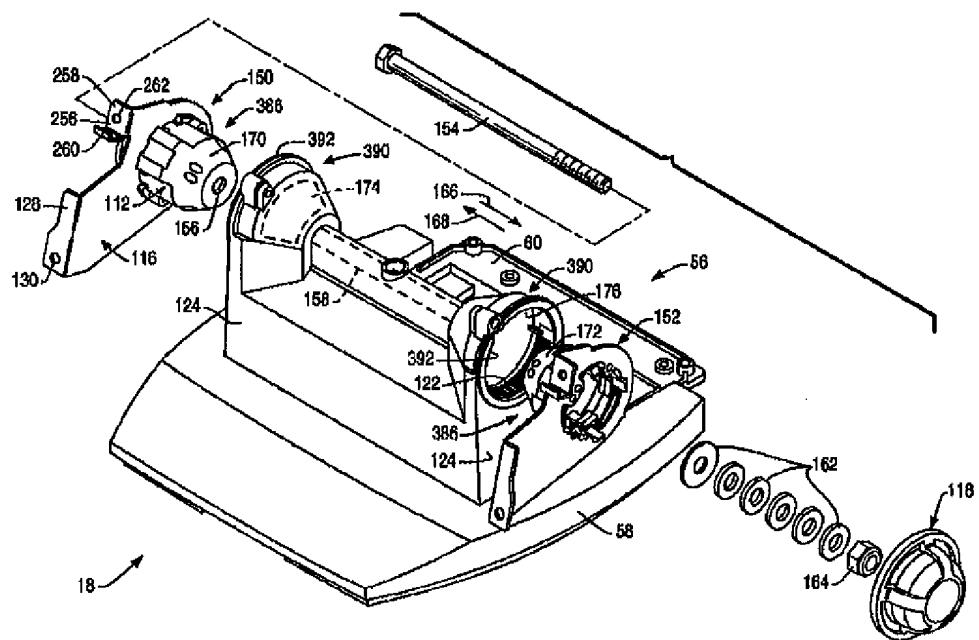
Drawing 15



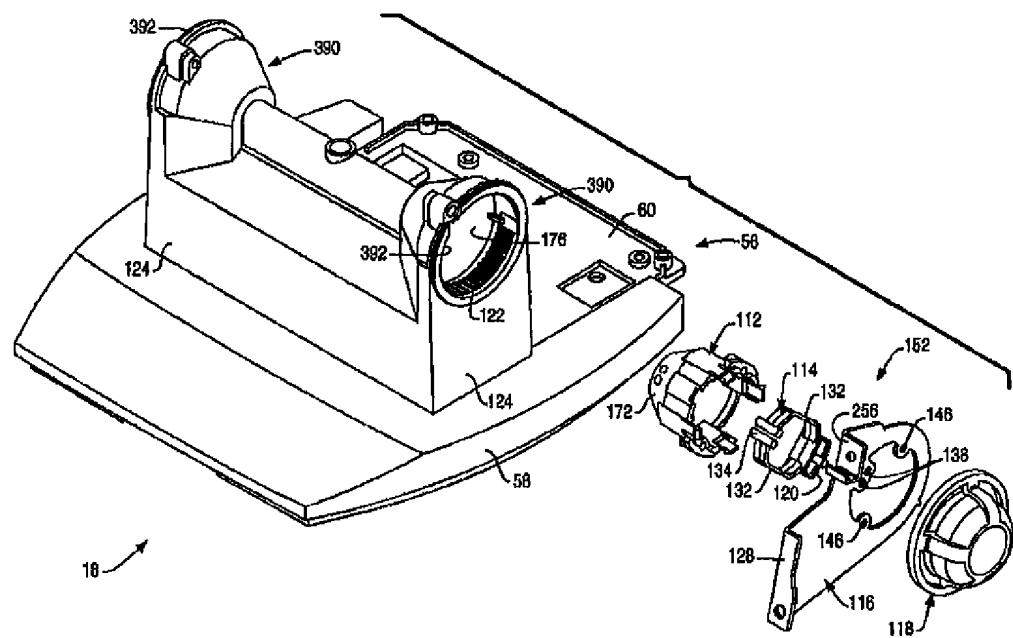
Drawing 16



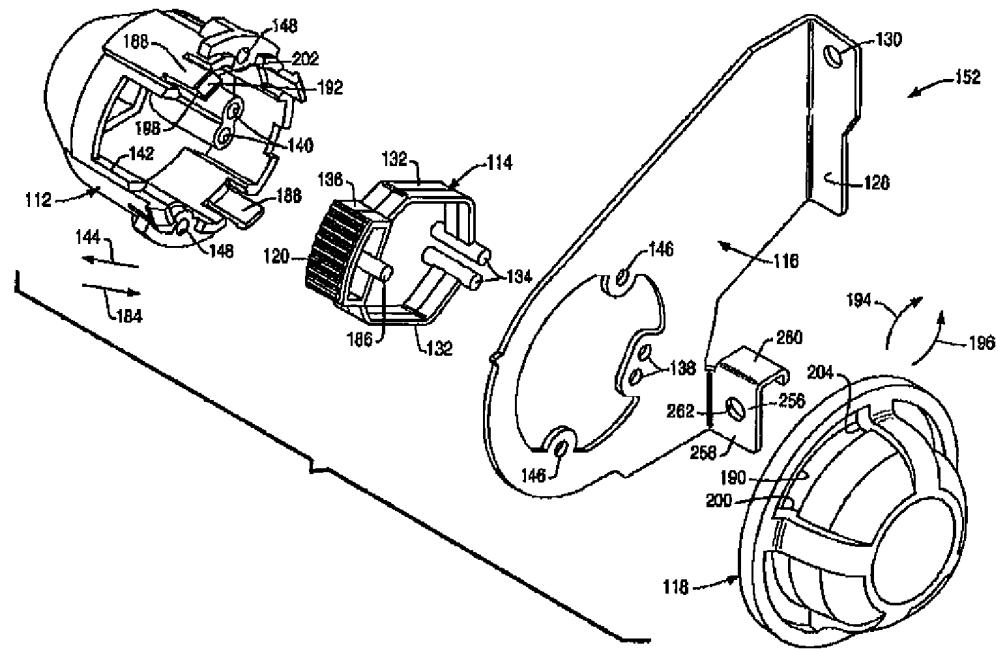
Drawing 17



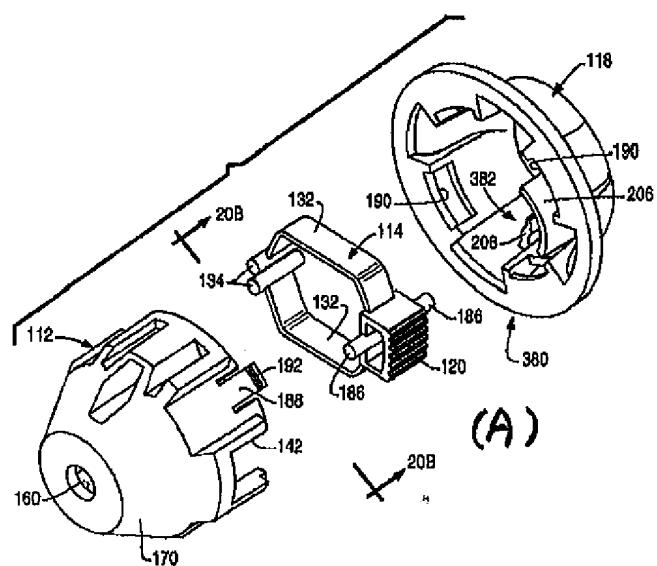
Drawing 18



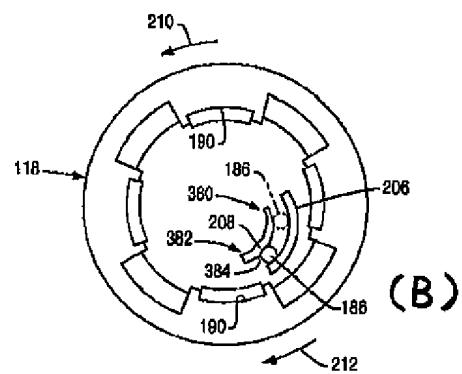
Drawing 19



Drawing 20

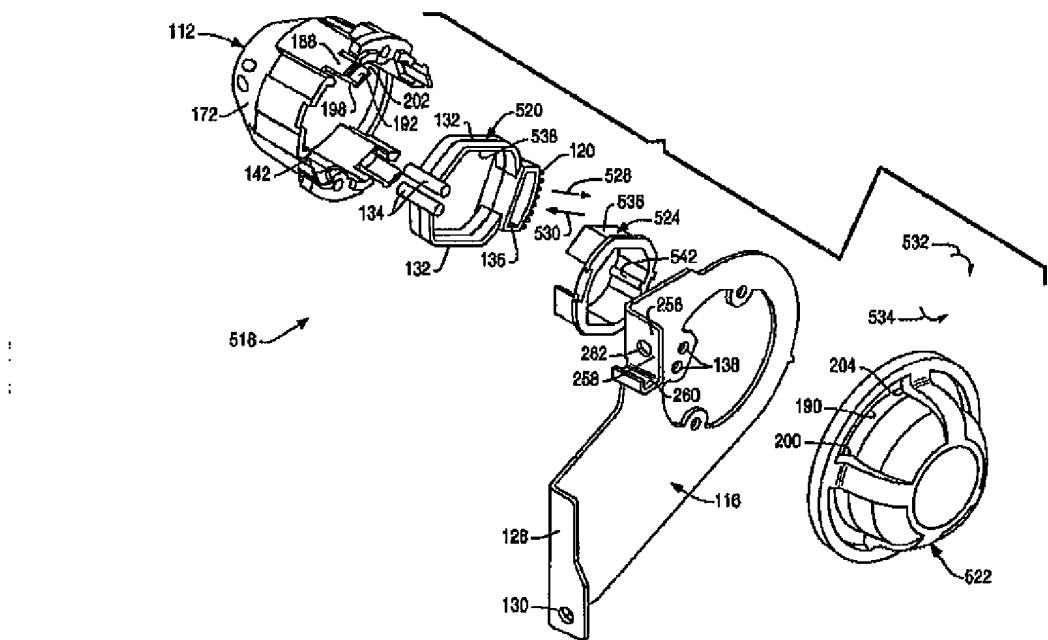


(A)

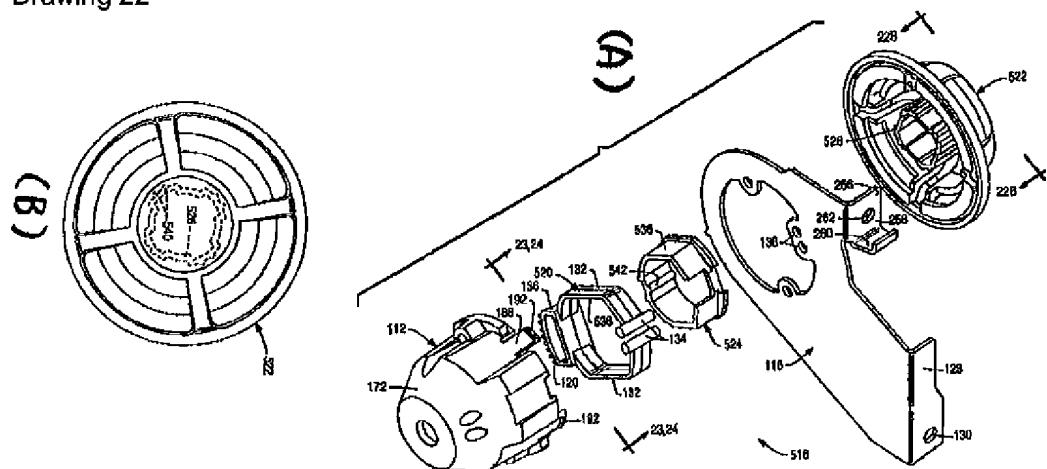


(B)

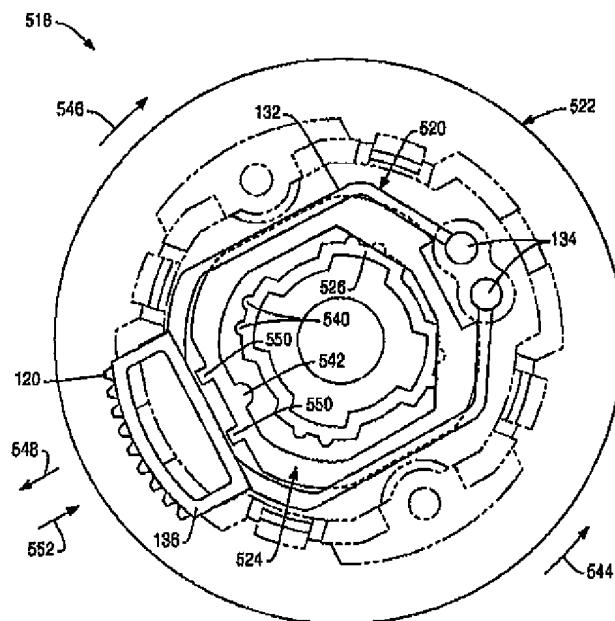
Drawing 21



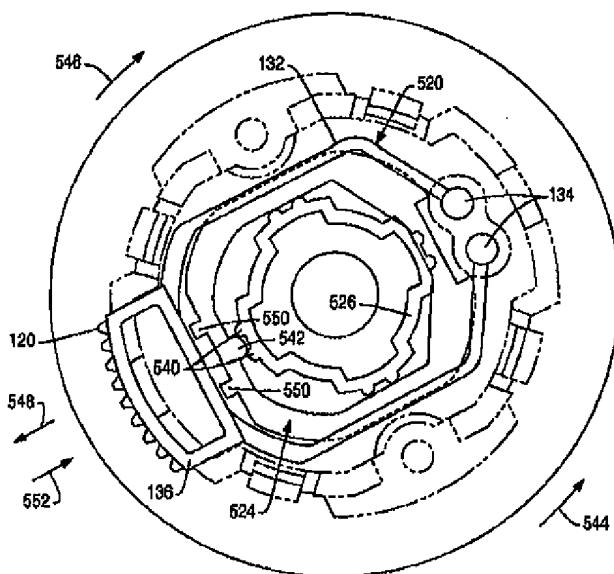
## Drawing 22



### Drawing 23



Drawing 24



Drawing 25

